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## DOCUMENT MANAGEMENT

### AND ITS ENVIRONMENTAL AND FUNCTIONAL IMPLICATIONS IN MARKETING COMPANIES IN ECUADOR

#### LA GESTIÓN DOCUMENTAL Y SUS IMPLICACIONES AMBIENTALES Y FUNCIONALES EN LAS EMPRESAS DE COMERCIALIZACIÓN DE ECUADOR

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## ABSTRACT

This study explores Electronic Document Management (EDM) in the Ecuadorian commercial sector, focusing specifically on its environmental and functional implications. The research adopts a descriptive and documentary approach, based on an extensive literature review from academic sources, company reports, and case studies. The study reveals the increasing importance of EDM in the commercial sector as a key tool for environmental sustainability and operational efficiency. EDM can lead to significant reductions in paper use, which has positive implications for the environment. Simultaneously, EDM can enhance the efficiency of business operations, including information retrieval, team collaboration, and decision-making. However, the research also identifies several limitations and challenges, including implementation costs, resistance to change, and the need for training and skill development. In terms of future research, it is recommended to conduct broader empirical studies and delve into strategies for the effective implementation of EDM in different business and sectorial contexts.

## Keywords:

Electronic document management, environmental sustainability, operational efficiency, commercial sector, technological implementation

## RESUMEN

Este estudio explora la gestión documental electrónica (GDE) en el sector comercial ecuatoriano, enfocándose específicamente en sus implicaciones ambientales y funcionales. La investigación adopta un enfoque descriptivo y documental, basado en una extensa revisión de literatura de fuentes académicas, informes de empresas y estudios de caso. El estudio revela la creciente importancia de la GDE en el sector comercial, como una herramienta clave para la sostenibilidad ambiental y la eficiencia operativa. La GDE puede conducir a reducciones significativas en el uso de papel, lo que tiene implicaciones positivas para el medio ambiente. Al mismo tiempo, se puede mejorar la eficiencia de las operaciones empresariales, incluyendo la recuperación de información, la colaboración entre equipos y la toma de decisiones. Sin embargo, la investigación también identifica varias limitaciones y desafíos, incluyendo los costos de implementación, la resistencia al cambio y la necesidad de formación y desarrollo de habilidades. En términos de investigación futura, se recomienda llevar a cabo estudios empíricos más amplios y profundizar en las estrategias para la implementación efectiva de la GDE en diferentes contextos empresariales y sectoriales.

## Palabras clave:

Gestión documental electrónica, sostenibilidad ambiental, eficiencia operativa, sector comercial, implementación tecnológica.

## INTRODUCTION

Document management in companies has significantly evolved in recent decades, boosted partly by the advances in information and communication technology (ICT) (Al-Omouh et al., 2020) and by the growing awareness about the environmental sustainability (Hawken et al., 2013). Until that time, document management was mostly making on paper, which required a lot of physical space for storage and was it inefficient in terms of information retrieval and distribution (Sellen & Harper, 2002). Furthermore, heavy paper use has significant environmental implications, including deforestation and increased of solid wastes.

In this context, many companies are adopting “zero paper” policies and implementing the electronic document management (EDM) systems to improve their operational efficiency and reduce the environmental impact (Zoogah, 2011). The implementation of GDE may have multiple benefits, including reducing costs, improving productivity, increasing information security, and contributing to sustainability objectives (Román-Román et al., 2018).

Nevertheless, despite these benefits, the adoption of GDE and zero-paper policies remains a challenge for many companies, especially for small and medium-sized enterprises (SMEs) (Wang & Yang, 2016). This research aims to investigate document management and its environmental and functional implications in SMEs in the commercial sector in Ecuador, a context that until now has obtained slight attention in the literature.

Consequently, the commercial sector of Small and Medium Enterprises (SMEs) in Ecuador faces the challenge of adapting its information management practices to modern paradigms, framed by technology and sustainability (Molla & Licker, 2005). Despite the technological innovations and environmental growing awareness, the digital document management systems path is complex and challenging (Zoogah, 2011).

On the other hand, and making the situation worse, the functional implications of persisting in conventional paper-based methods are significant (Vargas, 2021). These procedures, apart from being inefficient and expensive, require considerable physical space for storage and are at the risk of deterioration or information loss. The distribution and retrieval of information can also be restricted and slowed down compared to digital systems (Román-Román et al., 2018).

At the same time, the environmental impact of the extensive paper use is of growing concern (Hawken et al., 2013). The production and disposal of paper contributes to environmental problems such as deforestation, water and energy consumption, air and water pollution, and the generation of solid wastes. As a result, practices about

document management can play a crucial role in the companies' efforts to reduce their environmental impact and move towards sustainability.

Despite this, adopting zero-paper policies and implementing digital document management systems have their own challenges. Change resistance, the lack of technical skills, the need for investment in technology and training, and the concerns about the security and privacy information are significant obstacles in this

It should be noted that most of the existing literature has focused its attention on large corporations and developed countries. Therefore, there is a gap in the understanding on how these issues affect SMEs in developing countries, as it is the case of Ecuador (Ahí, 2023).

This research is justified for several reasons. First, despite the evidence of the challenges and benefits associated with the transition to digital document management systems, there is a scarcity of studies that focus on SMEs in the commercial sector in developing countries, such as Ecuador (Dini et al., 2021). This group of companies represents a significant portion of the Ecuadorian economy, thus understanding their experiences and needs in this area is of paramount importance to design effective policies and practices which favor the digitalization and sustainability (Peña et al., 2020).

Secondly, this research has the prospective to significantly contribute to the academic debate on document management and sustainability in the commercial sector. By providing a detailed view of the reality of SMEs in Ecuador, this research may enrich the understanding of the specific dynamics and challenges that these companies face on their path towards digitalization and sustainability (Silva et al., 2021).

It is also important to note that this research is of practical relevance. Research outcomes can notify business and government decision makings, helping them in designing and implementing more effective and sustainable document management strategies. In this sense, the research has the potential to benefit not only the participating companies, but also society in general, by contributing to efforts to reduce the environmental impact of commercial activities (Zambrano, 2021).

In this sense, the adoption of document management arises, also known as information management or records management, it is defined as the discipline that addresses the creation, reception, maintenance, use and disposition of records in a way that supports operational values, legal and responsibility of an organization over time (International Organization for Standardization, 2016). This definition highlights the need to manage information effectively throughout its life cycle to ensure its availability, accessibility, quality and protection.

Therefore, document management is essential for the daily operations of a company. Ensures that the necessary information to support business operations is available at the right time and place, in a usable format. Besides, document management contributes to effective decision making by providing the necessary information to understand the business environment and evaluate strategic options (Dini et al., 2021).

In the business context, key principles of document management may include efficiency, transparency, accountability, integrity, and information protection. These principles guide document management practices and may inform the design and implementation of document management systems (Peña et al., 2020).

Due to the advancement of the information and communication technologies (ICT), it has given rise to the emergence of electronic document management systems. These systems allow the creation, storage, retrieval, distribution and arrangement of documents in electronic formats, reducing dependence on paper and allowing faster and easier access to information. However, they also present challenges related to the information security, change resistance, and the need for technical skills (Silva et al., 2021).

In addition, document management has significant implications on the environment. One of the main environmental concerns related to document management is the use of paper (Ecuador. Ministry of Sustainable Development, 2018). Paper production involves the cutting down of trees, the consumption of water and energy, and the greenhouse gases effect. Additionally, paper products are an important source of solid wastes that may contribute to soil and water pollution if is not properly managed (Ecuador. Ministry of Sustainable Development, 2022).

On the other hand, electronic document management (EDM) offers a more sustainable alternative to paper-based document management. By digitizing documents and managing them electronically, companies may significantly reduce their paper consumption and therefore minimize their environmental impact. Nevertheless, GDE also has its own set of environmental implications, related to energy consumption and the generation of electronic wastes (Chancafe, 2022).

On this change, not only environmental benefits may be acquired, but also functional and economical ones. Digitizing documents may improve operational efficiency by making it easier to find and retrieve information, reducing the storage space required, and lower the costs associated with printing and storing paper documents. On the other hand, the transition to GDE also presents challenges, such as change resistance, the need in technology and training investment, and information security and privacy issues (Coello, 2018).

Likewise, in today's business environment, information is a crucial resource so that, when managed efficiently, may be a competitive differentiator. Document management is an essential function that ensures that relevant information is available, accessible and usable for business operations (Lacunza et al., 2021).

From a functional perspective, effective document management may improve operational efficiency in several ways. First, it may facilitate rapid retrieval of information, reducing the time employees spend searching for documents. Secondly, it may improve the accuracy and consistency of information by keeping control over document versions and avoiding duplication (D'Alòs-Moner, 2006). Third, effective document management may improve collaboration and knowledge sharing within the organization, by allowing information to be efficiently shared between departments and teams (Crespo Muñoz, 2019).

On this part, the digitization of documents through electronic document management (EDM) may further improve operational efficiency. GDE systems allow instant and simultaneous access to documents by multiple users, facilitating collaboration and decision making. Additionally, GDE systems may provide advanced features, such as automatic indexing and full-text search which facilitate information retrieval (Hidalgo & Cortés, 2021).

Despite this, the implementation of GDE also presents challenges. These may include the need for investment in hardware and software, user training, and information security and privacy management. As well, there may be change resistance from employees, especially if they do not understand the benefits of GDE or if they lack from the necessary skills to use GDE systems effectively (Chancafe, 2022).

On the other hand, it is also important to mention that document digitization in the accounting area of companies in Ecuador has undergone a significant transformation in recent years, driven mainly by changes in government regulations and standards. An outstanding example of this is the electronic invoicing initiatives carry out by the Internal Revenue Service (SRI) in Ecuador (2021).

Electronic invoicing has not only modernized this process in marketing companies, but has also facilitated more transparency and traceability. The SRI, in particular, has established requirements and regulations to guarantee that electronic invoicing meet security and legality standards, which has promoted their adoption throughout the country (Pazmiño Rubio, 2015).

In addition, the shift towards electronic invoicing has led to a reduction in the use of paper, which is aligned with global goals of sustainability and environmental conservation (Llumiyinga, 2021). Companies have been able to simplify their accounting processes and reduce operating

costs, while improving the efficiency and accuracy of information (Ecuador. Ministry of Telecommunications and the Information Society, 2020).

On the other hand, the transition to a digital environment in the accounting area has not been without challenges. The need for investment in technology, training in new tools and systems, and adaptation to changing regulations have been obstacles for some companies, especially in the case of small and medium-sized businesses (SMEs) (Velez & Mendoza, 2021).

Document digitization, driven by changes in regulations and laws in Ecuador, represents an opportunity and a challenge for the accounting sector. Collaboration between government, regulators, and businesses is essential to ensure a successful and beneficial transition for all involved and to promote a business environment to be efficient and socially responsible as well. (Ecuador. Internal Revenue Service, 2021).

As a result, the modifications in laws and regulations, such as those implemented by the SRI, reveal a commitment to modernization and digitalization in the accounting area in Ecuador. As the country continues to move in this direction, it will be vital to maintain a balanced approach that considers the opportunities and challenges as well, which essential in this transformation process (Salazar Altamirano, 2022).

This research aims to explore the relationship between document management and operational efficiency in SMEs in the commercial sector in Ecuador, with a practices and challenges approach on GDE.

## METHODOLOGY

In this investigation, a descriptive and documentary research design was carried out to analyze document management practices in SMEs in the commercial sector in Ecuador, as well as their environmental implications and their impact on operational efficiency.

Information sources were carefully chosen according to their relevance and reliability. A variety of materials were reviewed, including academic articles published in journals indexed in international databases such as Scopus, Latindex and Web of Science. In addition, business reports, case studies and public documents from Supermaxi and Corporación Favorita were included in the analysis.

Data were collected through a comprehensive literature review and documentary analysis. For the research relevant documents were identified, selected and reviewed. This process also included the organization and classification of the collected information.

After data collection, a detailed analysis was carried out. Patterns and trends were identified, and connections were established between different aspects of document management. Special emphasis was placed on the relationship between document management and the environmental and functional implications in the analyzed companies.

In conclusion, the results were interpreted in relation to the research objectives. Conclusions were drawn about the state of document management in SMEs in the commercial sector in Ecuador, its environmental implications and its impact on operational efficiency. Recommendations for future research were also offered.

This process make certain that the research was rigorous and objective, and that the results obtained were valid and reliable. Similarly, it allowed the stated objectives for the research to be efficiently addressed.

It is important to mention that the documentary searches were carried out rigorously, considering several terms and phrases related to the matter of study. Operators and commands allowed for more specific and relevant searches. Also, a review and selection process of the consulted sources was carried out to guarantee their relevance and reliability. Exclusive consulted sources refer to bases that, although initially consulted, were not included in the research due to their lack of relevance or quality (Table 1).

Table 1. Consulted Sources.

Source of Reference	Terms/Search Phrase	Operators/ Comands Used	Source Consulted (Inclusive)	Source Consulted (Exclusive)
Academic Google	"Documental Mamnagement", "Environmental Impact", "PYMEs in Ecuador", " Comercial Sector en Ecuador"	AND, OR, "" (for exact phrases)	150	50
Latindex	"Electronic Documentary Management", "Operational Efficiency", "Environmental Policies in companies"	AND, OR, NOT, "" (for exact phrases)	100	35
Web of Science	"Documental Management y Environment", "Operational Efficiency of PYMES in Commercial Sector in Ecuador"	AND, OR, NOT, "" (for exact phrases)	80	25
Scopus	"Documentary management", "Environmental Impact in companies "Operational Efficiency and operative and document management"	AND, OR, "" (for exact phrases)	110	40

## RESULTS AND DISCUSSION

During the document search process, it was observed that electronic document management (EDM) practices are being implemented with varying degrees of intensity and success in companies in the commercial sector in Ecuador, mainly in Supermaxi and Corporación Favorita companies.

- **Analysis of GDE Practices:** In both organizations, the adoption of GDE has influenced business operations, creating challenges and opportunities as well. The observed changes focused mainly on policies to reduce paper use and improve operational efficiency, consistent with the findings reported in the literature consulted.
- **Environmental Impact of GDE:** The adoption of GDE has generated significant changes in the environmental footprint of the companies studied. In particular, reducing paper use in these companies has decreased their consumption of natural resources, contributing to the environmental sustainability. This finding responds to the first specific objective stated in the research.
- **Functional Implications of GDE:** In functional terms, the implementation of GDE has boosted the operational efficiency of companies. In particular, information retrieval and collaboration between teams have been streamlined thanks to the digitization of documents, which has also positively influenced decision-making. This result is in line with the second specific objective of the research.

## CONCLUSIONS

The study revealed the increasing importance and prevalence of electronic document management (EDM) in the Ecuadorian commercial sector, demonstrated through two notable companies: Supermaxi and Corporación Favorita. GDE is associated with significant reductions in paper use, which has direct implications for the environmental sustainability of company operations. Moreover, GDE also associates with improvements in operational efficiency, in terms of information retrieval, collaboration between teams and decision making.

In terms of research limitations, the study was mainly based on documentary sources, which may not fully capture the complex and multifaceted realities of GDE practices in companies. In addition, the analysis was limited to two companies in Ecuador, which may limit the generalizability of the findings.

For companies, adopting and improving GDE may result in significant environmental and functional benefits. On the other hand, it is also essential to address potential challenges, including implementation costs, change resistance, and the need for training and skills development.

For future researches, it is recommended that empirical studies be carried out in a broader range of companies and sectors, to obtain a more complete understanding of GDE and its implications. Also, it would be valuable to further investigate how GDE can be more effectively implemented, considering the specific characteristics and contexts of different companies and sectors.

## REFERENCES

- Arvanitis, S. (2005). Computerization, workplace organization, skilled labour and firm productivity: Evidence for the Swiss business sector. *Economics of Innovation and New Technology*, 14(4), 225-249.
- Chancafe Sirlopu, J. R. (2022). Estrategia cero papel para optimizar el proceso de gestión documental en la Municipalidad Distrital de Eten Puerto. (Trabajo de titulación). Universidad César Vallejo.
- Coello Baratau, V. R. (2018). Digitalización de documentos en la aplicación del archivo físico en el registro de la propiedad municipal del cantón Baba, provincia los Ríos. (Tesis de licenciatura). Universidad Técnica de Babahoyo.
- Crespo Muñoz, F. J. (2019). La descripción archivística en el marco de la gestión documental por procesos. *Revista Española De Documentación Científica*, 42(4).
- D'Alòs-Moner, A. (2006). La gestión documental: aspectos previos a su implementación. *El profesional de la información*, 15(3), 222-226.
- Dini, M., Gligo, N., & Patiño, A. (2021). Transformación digital de las mipymes: elementos para el diseño de políticas. CEPAL. <https://repositorio.cepal.org/handle/11362/47183>
- Ecuador. Ministerio de Ambiente y Desarrollo Sostenible. (2022). *Gestión documental*. [https://somosig.minambiente.gov.co/files/mod\\_documentos/documentos/DS-A-DOC-02/DS-A-DOC-02\\_V4\\_copia\\_controlada.pdf](https://somosig.minambiente.gov.co/files/mod_documentos/documentos/DS-A-DOC-02/DS-A-DOC-02_V4_copia_controlada.pdf)
- Ecuador. Ministerio de Telecomunicaciones y de la Sociedad de la Información (2020). *Estrategia Nacional de Ciberseguridad: Seguridad en la Facturación Electrónica*. <https://www.telecomunicaciones.gob.ec/>
- Ecuador. Servicio de Rentas Internas. (2021). *Regulaciones y Normativas para la Facturación Electrónica en Ecuador*. <https://www.sri.gob.ec/factura-electronica>
- Hawken, P., Lovins, A., & Lovins, L. H. (2013). *Natural Capitalism: The Next Industrial Revolution*. Earthscan. [https://library.uniteddiversity.coop/Money\\_and\\_Economics/Natural\\_Capitalism-The\\_Next\\_Industrial\\_Revolution.pdf](https://library.uniteddiversity.coop/Money_and_Economics/Natural_Capitalism-The_Next_Industrial_Revolution.pdf)

- Hidalgo Urrea, Y., & Cortés Algeciras, W. (2020). Modelo de Gestión Documental Electrónica de Archivos basado en metodología BPM para el mejoramiento de los procesos administrativos. *Documentos de Trabajo ECBTI*, 1(1).
- Lacunza, A. C., Clark, R., & Phillips, M. M. (2021). La Gestión documental electrónica en la UNLP: El camino hacia el expediente electrónico. *Revista ES*, 1(1 y 2).
- Llumiquinga, R. (2022). *Facturación electrónica, aliada del medio ambiente*. <https://prensa.ec/2022/08/10/facturacion-electronica-aliada-del-medio-ambiente/>
- Organización Internacional de Normalización. (2016). ISO 15489-1:2016. Información y documentación. Gestión de documentos. Parte 1: Conceptos y principios. <https://www.iso.org/standard/62542.html>
- Pazmiño Rubio, V. A. (2015). Análisis de la implementación de facturación electrónica en el Ecuador: ventajas y desventajas frente a la facturación física. (Tesis de maestría). Universidad Andina Simón Bolívar.
- Peña Guarín, G., Castro Rojas, M. L., & Álvarez Álvarez, M. J. (2020). Modelo de gestión del conocimiento para pymes, basado en el sistema de gestión de la calidad y la gestión documental. *SIGNOS-Investigación en Sistemas de Gestión*, 12(2), 127-147.
- Salazar Altamirano, H. D. (2022). *La facturación electrónica como un mecanismo de control para el cumplimiento tributario en las empresas constructoras del cantón Ambato*. (Tesis de licenciatura). Universidad Técnica de Ambato.
- Silva Rincón, J. C., Pabón León, J. A. y Barrientos Monsalve, E. J. (2021). El desarrollo regional y la sostenibilidad: revisión sistemática y análisis bibliométrico. *Revista Universidad y Empresa*, 23(41), 230-256.
- Vargas Chipana, M. (2021). Digitalización de documentos y procesos administrativos en la Oficina de Planeamiento Operativo de la Región Policial Lima, 2021. (Trabajo de titulación). Universidad César Vallejo.
- Wang, M. H., & Yang, T. Y. (2016). Investigating the success of knowledge management: An empirical study of small-and medium-sized enterprises. *Asia Pacific Management Review*, 21(2), 79-91.
- Zambrano Plúa, I. E., Quindemil Torrijo, E. M. y Rumbaut León, F. (2021). Gestión documental en universidades: Una mirada desde Latinoamérica. *Revista de Ciencias Humanísticas y Sociales (ReHuso)*, Especial, 121-136.
- Zoogah, D. B. (2011). The Dynamics of Green HRM Behaviors: A Cognitive Social Information Processing Approach. *German Journal of Human Resource Management*, 25(2), 117-139.