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Digital Transformation of Civil Registration System in Cameroon: Innovations in e-Governance

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civil status act,
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Abstract

Objective: to study the innovative transformations in the field of e-Governance introduced into Cameroon's civil registration system during the 2024 legislative reforms. The focus is on assessing the impact of these transformations on improving governance efficiency, transparency, accessibility of services for citizens, as well as improving statistical accounting of vital events.

Methods: the work uses general scientific methods of analysis and synthesis, classification, systematic and functional approaches, as well as formal legal and comparative legal methods.

Results: the research shows that measures like introduction of electronic declaration of civil status acts, creation of a national database and transition to electronic certificates can dramatically improve the efficiency and accessibility of services for the population. However, the authors emphasize that the successful implementation of digital innovations requires overcoming significant barriers, such as insufficient technological equipment, limited Internet access, and low digital literacy of citizens. These challenges make it necessary to develop additional regulatory and support mechanisms. Particularly important is the balance between digitalization and ensuring the rights of citizens in the context of electronic registration.

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Scientific novelty: the work provides unique empirical data on digitalization of public services in Cameroon. This is especially important for the countries of the global South, where such transformations are slow and fragmentary. The study makes a significant contribution to the scientific debate by expanding understanding of digital technology adoption models through the lens of expected usefulness and perceived ease of use in developing countries.

Practical significance: recommendations for legislators, government officials and other stakeholders were developed. The authors emphasize the need to adopt a regulatory framework as soon as possible, introduce educational programs for employees and citizens, and ensure access to digital technologies. These measures aim at creating a sustainable infrastructure for an effective transition to electronic systems and improving the quality of public services. The work contributes to the study of public governance digitalization, offering both theoretical concepts and practical solutions that can be adapted for other countries with similar challenges.

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Introduction

Information and Communication Technology's importance in boosting governance and service delivery has become central in a progressively interconnected world. As countries struggle for more efficiency and transparency, incorporating electronic governance (e-Governance) mechanisms has developed as a transformative tool in public administration (Bannister & Connolly, 2012; Oliveira et al., 2020). Countries have adopted and implemented these tools to varying degrees. The United Nations (UN) reported that 161 countries offer online platforms for the application of birth certificates, 152 countries provide digital services for marriage certificates, and 151 countries offer electronic application services for death certificates, recording an increase of 3, 1 and 8 % respectively from 2022 data¹. This increase in the computerisation of vital events declaration and registration reflects the importance of civil status systems to governance. While most countries in the Global North have registered full digitalisation in these services, the reverse holds for the Global South, particularly in Africa where the full digitalisation rate stands at 11 % for birth certificate applications and 7 % for marriage and death certificates². In Cameroon, the public sector is transitioning to electronic service delivery processes³. This transformation is contained in the 2016 National ICT Strategic Plan by 2020, and the National Development Strategy by 2030 which highlight the digitalisation of public governance to achieve sustainable development and uplift Cameroon to an emerging economy by 2035 (Sevidzem, 2024).

The constantly developing technologies are parallel with citizens' demands, requiring governments to align public service delivery to ICT. This paper focuses on the electronic innovations introduced in civil status registration systems in Cameroon by Law No. 2024/016 of 23 December 2024. This law resonates with the policy documents mentioned above, which include digitising the civil status and accompanying the digital transition with appropriate institutions and ICT tools within all government institutions (Sevidzem, 2024). Civil status registration – an indispensable tool that reinforces citizenship rights and societal organisation – stands at the lead of these policy innovations. The ability to correctly and efficiently record vital events such as births, marriages, and deaths is fundamental to national identity and social equity.⁴ Also, civil

¹ United Nations. (2024). E-Government Survey, 2024. UN (2020). <https://clck.ru/3Gf8K>

² Ibid.

³ Sindeu, E. (2013). Implementation of e-government in Cameroon. In 7th Annual E-Government Forum, Muyuno, Uganda, 25–27 March (pp. 1–24).

⁴ World Economic Forum. (2022, October 22). Civil registrations and vital statistics: Here's why they're fundamental to society. <https://clck.ru/3Gf8Qt>

status is crucial in establishing the legal identity of citizens, guaranteeing the exercise of their rights and facilitating their engagement in the social and political life of the country⁵.

The need for improvement in civil status registration in Cameroon had become particularly persistent. The country's civil status registration system has historically encountered multiple barriers, including bureaucratic inefficiencies, limited access to services, and a lack of public awareness and low birth registration rate with over seven million citizens currently without birth certificates⁶. After independence and reunification, Cameroon adopted Law No. 68-LF-2 OF 11 June 1968 to govern civil status systems. This law was replaced by Ordinance No. 81-02 of 29 June 1981, and later modified by Law No. 2011/011 of 6 May 2011. At the operational level, the National Civil Status Bureau (BUNEC) instituted in 2011 was only created in 2013 by a presidential decree on the organization and functioning of the structure⁷. This institution in charge of the supervision, control, regulation and evaluation of the national civil status system only went operational in 2016, and by 2023 did have an official comprehensive record of civil status events in Cameroon⁸.

The process of transforming Cameroon's civil status registration was initiated in 2007 with Cameroon's Civil Status Rehabilitation Programme (PRE2C). In 2010, Cameroon adhered to the African Programme on Accelerated Improvement of Civil Registration and Vital Statistics (APAI-CRVS), and later adopted the 2018-2022 strategic plan for civil status rehabilitation. By 2015, Prime Ministerial Order No. 019/CAB/PM of 24 February 2015, a steering committee was created to ensure the progress of PRE2C, chaired by the Minister of Decentralization and Local Development⁹. This was followed by the adoption of a master plan for the computerisation of the national civil registry system for the period 2019-2023. These activities contributed to the 2024 law on civil status registration systems in Cameroon.

Cameroon's civil status system is semi-decentralised, with local civil status centres and BUNEC at the central level. The decentralised centres comprise primary civil status

⁵ National Institute of Statistics. (2023). Rapport sur les statistiques de l'état civil au Cameroun (2018–2022). <https://clck.ru/3Gf8Uq>

⁶ Ayang, M. (2024, November 29). Cameroon introduces draft laws on civil registration reform, data protection. Biometric Updates. <https://clck.ru/3Gf8ZM>

⁷ National Institute of Statistics. (2023). Rapport sur les statistiques de l'état civil au Cameroun (2018–2022). <https://clck.ru/3Gf8Uq>

⁸ Ibid.

⁹ Zewoldi, Y. (2019). Snapshot of Civil Registration and Vital Statistics in Cameroon. Centre of Excellence for Civil Registration and Vital Statistics. <https://clck.ru/3Gf8q5>

centres at the level of Councils, and secondary civil status centres in villages and neighbourhoods. Cameroon currently counts 375 main civil status centres in Cameroon and 56 in Consular Posts and Diplomatic Missions, and 2455 secondary centres¹⁰. The registration of vital events at these centres is carried out by Civil Status Registrars – City Mayors and their Deputies, Mayors and their Deputies assisted by Secretaries (Ordinance No. 81-02, article 7).

Notwithstanding these measures, the declaration and registration of births and deaths in Cameroon is undermined by poor knowledge of the importance of civil status certificates, the non-mastery of the legal frame work governing civil status, financial constraints, accessibility to centres by enclaved population, and administrative bottlenecks.¹¹ The promulgation of the 2024 law marks a fundamental innovation in addressing these issues through implementing electronic systems framed to modernise processes and boost citizen participation. This law mirrors a commitment to transforming public administration and improving the overall quality of governance in Cameroon¹². By 2018, the birth registration rate in Cameroon stood at 54 %, while death registrations for 2020 were at 9.71 %¹³.

While there is increasing body of research on e-Governance and its bearings across various domains, limited scholarship has specifically focused on the electronic innovations of civil status registration in the Cameroonian context introduced by the 2024 law. Existing research on e-Governance in Cameroon has focused on taxation procedures (Djossa-Tchokoté et al., 2024), local public service delivery (Sevidzem, 2024), e-participation (Xin et al., 2023), general e-Governance implementation¹⁴.

This study seeks to fill the gap by critically investigating the e-Governance innovations introduced by the 2024 law and their potential to reform civil registration operations in Cameroon.

¹⁰ National Institute of Statistics. (2023). Rapport sur les statistiques de l'état civil au Cameroun (2018–2022). <https://clck.ru/3Gf8Uq>

¹¹ Ibid.

¹² Ayang, M. (2024, November 29). Cameroon introduces draft laws on civil registration reform, data protection. Biometric Updates. <https://clck.ru/3Gf8ZM>

¹³ National Institute of Statistics. (2023). Rapport sur les statistiques de l'état civil au Cameroun (2018–2022). <https://clck.ru/3Gf8Uq>

¹⁴ Sindeu, E. (2013). Implementation of e-government in Cameroon. In 7th Annual E-Government Forum, Muyuno, Uganda, 25–27 March (pp. 1–24).

The research's central question is: How can e-Governance innovations in civil status registration improve administrative efficiency and citizen involvement in Cameroon? To harness this problem, the study poses the following research questions: (1) What key electronic innovations have been introduced by the 2024 law on civil status registration in Cameroon? (2) How do these innovations impact service delivery and governance in the civil status registration sector? And (3) What challenges and opportunities do stakeholders face in implementing the innovative system?

The paper aims to: (1) explore the specific electronic innovations introduced by the 2024 law, (2) evaluate their implications for service delivery and governance, and (3) identify the barriers stakeholders may encounter during implementation and propose strategies to overcome them.

The research outcomes demonstrate that establishing a National Civil Status Database and the introduction of electronic declarations can significantly enhance the efficiency and accessibility of civil registration services¹⁵. However, challenges such as technological infrastructure gaps and public resistance to change must be addressed to achieve the full potential of these innovations.

This paper is structured as follows: The following section explores a comprehensive literature review, emphasising main themes and gaps related to the topic, followed by a theoretical framework. The methodology section presents the research design and data collection methods used in the study. The findings section details the results of the analysis, followed by a discussion that contextualises the results within the e-Governance broader landscape. The paper concludes with recommendations for ameliorating implementation and maximising the effectiveness of civil status registration in Cameroon.

1. Literature review

1.1 Conceptualising E-Governance

E-Governance denotes a transformative move that utilises information and communication technology (ICT) to boost the efficiency and effectiveness of public service delivery. It incorporates all aspects of government operations that involve ICT, including service delivery, citizen participation, and data management to achieve accountability, effectiveness and transparency of political processes (Grigalashvili, 2022; Heeks, 2006). This definition aligns with Umbach & Tkalec (2022) who suggest that it entails the application of digital machineries to improve public service delivery to citizens. Furthermore, e-Governance is viewed as a reciprocal interface between

¹⁵ Ayang, M. (2024, November 29). Cameroon introduces draft laws on civil registration reform, data protection. Biometric Updates. <https://clck.ru/3Gf8ZM>

the government and its internal and exogenous stakeholders employing digital tools.¹⁶ E-Governance transcends mere digitisation of services and aims to promote a more responsive and accountable public service by enhancing real-time relations between the population and public institutions (Heeks, 2006). This revolution is particularly essential in civil registration, where the incorporation of technology can rationalise hitherto traditionally sluggish and bureaucratic operations. Effective e-Governance requires robust technological infrastructure and appropriate planning to establish a more citizen-centric system.

While some scholars (Palvia & Sharma, 2007) contend that there is no difference between e-government and e-Governance, Grigalashvili (2022) argues that the two concepts and processes aim to digitally ameliorate government-user interaction, with the former being a substantial component of the latter. E-Governance aims to enhance the government's effectiveness through improved information flow and policy-making between the government and the population by employing ICT tools. By facilitating the exchange of information to achieve policy goals (Muttou et al., 2019), e-Governance creates an informed community, reducing government intervention time interval, and enhancing service delivery and public participation in a digital process (Umbach & Tkalec, 2022).

Some countries have successfully applied e-Governance innovations in civil registration. For instance, Estonia's e-residency system has been applauded as a model for digital governance, offering residents and citizens protected access to various government services online, including civil registration (Tammpuu & Masso, 2018; Kattel & Mergel, 2019). Likewise, India's Digital India approach aims to enhance the user-friendliness of civil registration services through mobile applications and online systems (Suthar et al., 2019). These case studies demonstrate that successful e-Governance application often entails robust stakeholder commitment, vigorous technological set-up, and a resolve to constant upgrading. The progress in e-Governance systems highlights a shift towards a participatory management approach that empowers citizens. However, governance innovations should integrate technological advancement and socially inclusive sensitive approaches. The effectiveness of e-Governance innovations significantly relies on contextual features such as available technological facilities, public trust in government, and legal mechanisms (Suthar et al., 2019).

¹⁶ Oyedokun, G., Adeolu-Akande, M., & Oyedokun, D. (2022). Assessing the Status and Challenges of e-Governance and e-Public Services Delivery in Nigeria. BAM 2022 Conference, University of Manchester (pp. 1–15).

1.2. E-Governance approaches and domains

Scholars have proposed various models adopted in e-Governance describing the movement of data and services between the service provider – the government – and the users – citizens (Grigalashvili, 2022; Halachmi, 2004; Prashar & Bawa, 2023). These approaches include e-advocacy, critical flow and comparative analysis (Prashar & Bawa, 2023). The critical flow model contends with the swift flow of vital information to the targeted recipients with the aid of ICT. The comparative analysis model concentrates on finding best practices in e-Governance and applying them as benchmarks to test other management systems (Halachmi, 2004; Grigalashvili, 2022). The e-advocacy model emphasises strengthening the various public domains to influence government policies through their input and feedback (Albert, 2009). The critical flow model's strength lies in its leverage on ICTs to achieve instant information transfer, reducing distance and time. The comparative analysis model on the other hand draws its strength from the unlimited capacity of electronic systems to stock valuable information and retrieve and disseminate it instantly across numerous barriers (Halachmi, 2004). On its part, the e-advocacy model, one of the widely used digital administration approaches, holds its strength in mobilising and pulling human resources and information beyond institutional and physical obstacles and implementing it for specific action.

Researchers have classified e-Governance and e-government into various types or domains, based on digital interactions between the government, citizens, economic sector, employees and other non-profit, political and social institutions (Fang, 2002). These interactions have been grouped into the following domains with a two-way digital interaction: Government-to-Government (G2G); Government-to-Business (G2B); Government-to-Citizens (G2C); Government-to-Employees (G2E); and Government-to-Nonprofit (G2N) (Fang, 2002; Kaisara & Pather, 2011). G2G involves digital cooperation, communication, information and commodities between government departments or agencies to enhance government efficiency and effective coordination. G2B preoccupies with digital communication between governments and businesses, including e-procurements, e-business incorporation and fiscal transactions. G2C focuses on creating electronic public services by the government, for access by the citizens. G2E concerns how governments undertake initiatives that facilitate the internal flow of information among state employees to digitise civil service processing and management systems. Finally, G2N entails information communication and transactions between the government and nonprofit organisations, political parties and other social groups.

1.3. The significance and relevance of e-Governance

Implementing the various e-Governance types discussed above provides multiple merits for the government and other actors. E-Governance enhances citizen engagement in policymaking procedures, achieving improved accountability (Schuppan, 2009). E-Governance eliminates barriers displacement cost, and time by citizens to participate in government processes. These barriers are removed through the effortless availability of public service information and improved mechanisms to liaise with the government (Sharma et al., 2021). By participating in government decision-making through management, citizens become co-initiators of decisions concerning them, in collaboration with the government. Digital governance therefore increases citizen participation across various segments of society such as economic, socio-cultural and geographical domains.

Moreover, e-Governance significantly influences the efficiency and accessibility of public service delivery through information diffusion (Sharma et al., 2021). By digitising procedures, states considerably cut processing times, enhancing user fulfilment and promoting higher participation rates (Halachmi, 2004). E-Governance ameliorates the quality of information communicated with its partners. Studies have revealed that countries applying online civil registration systems witness reduced waiting times and enhanced accuracy in record-keeping, which are essential for effective administration (Suthar et al., 2019). For instance, adopting digital birth and death registration in countries like Ghana has led to a notable increase in registration rates, demonstrating the potential of e-Governance to improve essential services (Suthar et al., 2019). The introduction of the m-Birth computerised infant birth registration system in Ghana resulted in a 15.5 % increment in birth registration between 2014 and 2017¹⁷. In March 2023, Kenya also introduced an electronic service for registering births and deaths¹⁸, leading to an increase in under-5 birth registration to 76 % as opposed to 65% in 2014¹⁹.

Furthermore, the e-Governance system's effectiveness can be weighed through various lenses, including user fulfilment, transparency, service delivery speed, and compliance rates. Heeks (2003) contends that e-Governance implementation is slow in developing countries due to the delay or non-implementation of projects and programmes, and the adverse outcome of implemented projects. Due to the scarcity of expertise causing digital illiteracy, most states encounter a digital divide, undermining

¹⁷ UNICEF. (2018). Assessment of the m-birth project in Ghana. <https://clck.ru/3Gf9Jp>

¹⁸ Njoya, S. (2023, February 6). Kenya to start issuing digital death and birth certificates. <https://clck.ru/3GfFXf>

¹⁹ UNICEF. (2023). Country Office Annual Report 2023: Kenya. <https://clck.ru/3Gf9MH>

successful e-Governance (Naqvi et al., 2021). This highlights that most countries in the global south experience limited e-Governance implementation due to political, economic and socio-cultural factors. Studies also reveal that countries employing inclusive monitoring and evaluation frameworks like the case of South Africa during COVID-19 (Naqvi et al., 2021), are more furnished to measure the effectiveness of their e-Governance processes (Suri & Sushil, 2017). These tools enable governments to detect improvement sectors and frame data-driven policies that promote service delivery.

1.4. The pitfalls of e-Governance

Notwithstanding the numerous benefits of e-Governance innovations discussed above, the process also has disadvantages. One of these is the vulnerability of the data which transit along e-Governance platforms. Muttoo et al., (2019) suggest that inadequately designed and implemented e-Governance processes can expose government and citizen's data to cyber security threats and illegal third-party access. This presents the need to integrate data safeguard tools in implementing e-Governance technologies. The threats of data loss and unauthorised access deter some countries from switching from paper systems to electronic processes (Munyoka, 2020), likewise, citizens fear possible government misuse of their information captured in electronic systems without their consent (Makwanya, 2022). The likelihood of public information misuse by unauthorised state institutions is evident, while the unconsented dissemination of citizens' personal information in electronic systems can undermine their right to privacy²⁰.

Furthermore, segments of the population in areas with inadequate internet connectivity – due to lack of facilities and low purchasing power – can become more deprived and sidelined from electronic innovations in service delivery, engraining the digital gap in society (Foster, 2020). E-governance implementation requires electronic tools, and most importantly internet literacy among service users. The absence of these facilities and knowledge may result in social segregation and relegation (Palvia & Sharma, 2007). Moreover, not all public sector employees overseeing e-Governance implementation possess the required technology proficiency²¹. Consequently, rich and technology-literate citizens and those in areas with internet connection will possibly access better public service than their poor and illiterate counterparts, and those in areas with poor or low internet connectivity. These demonstrate the noteworthy setbacks of digitising

²⁰ Zungu, S. (2024). The use of monitoring and evaluation as an improving e-Governance for enhanced service delivery: Master thesis. University of Johannesburg.

²¹ Ibid.

service delivery (Coe et al., 2001). This challenge is visible in Cameroon due to substantial infrastructural disparities across regions, restricting citizen participation in government action through e-Governance to persons living in urban areas and with resources to purchase electronic gadgets and access internet connection.

2. Theoretical framework

The theoretical lens for assessing the e-Governance innovations in civil registration in Cameroon is grounded in two main theories: e-Governance theory and the Technological Acceptance Model (TAM). These theories provide a solid base for understanding how technological innovations can transform public service delivery and facilitate accessibility. The theories offer a comprehensive perspective through which the electronic innovations of the new civil registration law can be measured.

E-Governance theory suggests incorporating information and communication technologies (ICTs) into government processes to improve service delivery, efficiency, transparency, and accessibility (Heeks, 2006). This theory accentuates the transformative strength of ICTs in enhancing public service delivery and promoting greater citizen participation. In the case of Cameroon's new civil registration law, e-Governance theory contends that adopting electronic systems can streamline registration operations, diminish bureaucratic delays, and improve the accuracy and consistency of civil records. By leveraging digital tools, the state can guarantee that citizens have easier access to registration facilities, fostering inclusivity and mitigating barriers to participation (Lubis et al., 2024).

The Technology Acceptance Model (TAM) is a solid theoretical lens for understanding user acceptance of electronic innovations, especially in the case of civil status registration in Cameroon. TAM suggests that perceived usefulness and perceived ease of use are the main factors influencing users' behaviour towards technology adoption (Davis et al., 1989). With electronic civil status registration, the perceived usefulness may be triggered by the efficiency and accessibility provided by digital systems, permitting citizens to declare vital events such as births, marriages, and deaths more expediently. Furthermore, the perceived ease of use is essential, as citizens must find the electronic process spontaneous and straightforward to access. This model potentially identifies challenges to adoption, such as technological literacy and infrastructure barriers, which are particularly pertinent in the Cameroonian context where digital literacy fluctuates significantly among the citizens.²² The TAM has been applied in various fields of study,

²² National Institute of Statistics. (2023). Rapport sur les statistiques de l'état civil au Cameroun (2018–2022). <https://clck.ru/3Gf8Uq>

including e-commerce (Araújo & Casais, 2020), e-learning, (Al-Gahtani, 2016) and e-justice (Reiling & Contini, 2022). By emphasising the constructs of expected usefulness and perceived ease of use, this research evaluates how these factors impact user attitudes and eventually their goal to adopt the electronic civil status registration system. This is particularly pertinent in Cameroon, where the government is modernising public services through digital technologies.

3. Methodology

This study is qualitative drawing on existing literature and legal and policy documents. This design allows for a detailed exploration of the new civil registration law in Cameroon and its e-Governance innovations. Qualitative research is appropriate for examining intricate phenomena and understanding the setting in which they ensue (Creswell & Poth, 2016). Data for this study was gathered from various sources to guarantee an in-depth assessment of electronic innovations and new civil registration laws. These sources included: government policy documents which are relevant for understanding the government's view and the official narrative related to e-Governance innovations; academic publications debating e-Governance innovations and civil registration systems to provide rich perspectives into the theoretical foundations and empirical evidence linked to the research; and reports from nongovernmental organisations and international bodies to derive an external viewpoint on e-Governance in civil registration systems.

The data collected from these sources was analysed using thematically. This approach involves categorising, scrutinising, and reporting patterns (themes) within the data. Thematic analysis is a flexible and valuable research instrument that offers a rich and detailed outline of the data (Clarke & Braun, 2017). Main themes, trends, and challenges associated with the automated innovations in the new civil registration law will be highlighted and discussed.

It is important to acknowledge the limitations of this study.

One possible limitation of this study's methodology is the dependence on secondary data sources, which may present biases in the original documents analysed. Additionally, the absence of primary data from actors like government officials, population, and civil society, may narrow the perimeter of the analysis. Addressing these methodological shortcomings, the study triangulates data sources by tapping official government data, scholarly publications, and data from other independent bodies and civil society.

4. Results: Overview of electronic innovations in Cameroon's new law

A textual analysis of law No. 2024/016 of 23 December 2024 on establishing the civil status registration system, particularly its provisions relating to e-Governance of civil registration has produced the following innovations.

4.1. Technological Innovations

The 2024 law introduces several important definitions and legal bases essential for understanding the use of e-Governance in civil registration in Cameroon. According to the new law, an electronic certificate is an electronic document secured by the electronic signature of its user, which attests, upon verification, to the authenticity of its content. An approved certification authority issues a qualified electronic certificate. These definitions lay the basis for the protected and authentic electronic recording and archiving of vital events. These innovations guarantee the authenticity of civil status documents, which is essential for upholding the integrity of records. Also, they introduce a supplementary degree of security and reliability, ensuring that the population can trust the documents delivered electronically.

Furthermore, the 2024 law in section 83 introduces a Unique Personal Identification Number (UPIN), allocated at birth, streamlining identification processes within Cameroon's civil status systems. This unique identifier is projected to ease communications between citizens and government agencies, reducing double identifications and bureaucratic ineptitudes. Also, the law dictates the digital recording and archiving of certificates associated with declared vital events, significantly improving data management abilities and permitting more efficient data retrieval when necessary.

4.2. Service Delivery Enhancements

One of the key remarkable aspects of the new law is the provision for electronic declaration of vital events, such as births, marriages, and deaths (Section 9). This innovation from purely traditional paper-based procedures to computerised systems improves citizens' accessibility, expedites the registration process and lessens the administrative load on citizens and government employees. Also, the 2024 law introduces the automation of the declaration of vital events, drawing up, issuance, and archiving of civil status documents, and the production of civil status statistics (Section 80). This automation boosts the efficiency and accuracy of civil registration processes. However, the modalities for electronic declarations will be stipulated by subsequent regulations, possibly ensuring that the process is tailored to users' needs. Unlike before, where the loss of an original copy of a civil status document required a lengthy judicial process for

obtaining a new one, the new law allows for obtaining copies of civil status documents from the NCSD in case of loss (Section 62(3)).

Moreover, the law expands the modes of publication of marriage banns from hardcopy pasting to online on the Council's website and introduces electronic communication of notices of intent to marry (Section 17). This innovation reinforces communication between Civil Status Registrars, improves transparency, and accelerates the marriage registration procedure. Significantly, civil status documents in Cameroon can now be delivered in printed and digital forms, with both formats holding the same legal validity (Section 29). This dual approach guarantees that citizens have flexibility in obtaining their documents, thereby improving overall service delivery. Furthermore, in section 126, the law demonstrates that the full implementation of e-Governance in civil service registration in Cameroon will flow from a pilot phase. Specifically, this provision of the law accords legal validity to "civil status certificates drawn up as part of pilot operations undertaken to computerise the civil status..." Moreover, section 70(2) of the 2024 law highlights the switch to digital administration, stipulating that any civil status centre which becomes fully digitalised shall be exempted from keeping registers in hardcopies. This demonstrates the government's commitment to progressively transforming civil registration in Cameroon through e-Governance.

4.3. Governance and Accountability

Creating a National Civil Status Database is a fundamental feature of the new law, providing a centralised repository for all civil status documents in Cameroon (Section 30). The database will host "all information, data, documents, copies, or forms, in both paper and digital form, related to the declaration of vital events and the drawing up of civil status documents" (Section 77). The enumerated data is kept and managed either in hardcopy or electronically by the civil status management body (Section 78(3)). This database ameliorates data integrity and improves accessibility for both citizens and civil status officials. Consolidating civil status records in a single location is expected to expand the efficiency of civil status management while keeping the data up-to-date and accurate.

The law also introduces electronic objections to marriage solemnisation, permitting individuals to lodge their protests through digital canals (Section 42). The same computerised channel applies to requests for dispensation for publication of banns addressed to the competent State Counsel (Section 18). This modernisation rationalises the procedure, making it more efficient and time-saving for citizens and judicial authorities.

4.4. Data Protection and regulatory frameworks

The law emphasises data protection and security in section 82, stating that “personal civil status data contained in the national civil status database shall be protected according to the laws on personal data protection.” This provision resonates with law No. 2024/017 of 23 December 2024 on personal data protection in Cameroon. This innovation echoes the government’s pledge to preserve citizens’ privacy and security in an increasingly digital world. Furthermore, Section 82 of the law on the civil registration system in Cameroon grants Civil Status Registrars and their Secretaries direct access to civil status data associated with their respective centres. The same access is granted to public administrations connected to the national civil status systems for specific or general consultation. To ensure efficiency and security, the law guarantees that the technical features of and procedure for electronic communication of civil status data must adhere to the law regulating electronic communications in Cameroon (Section 83). Electronic communications in Cameroon are governed by Law No. 2010/013 of 21 December 2010 as amended and supplemented by Law No. 2015/016 of 20 April 2015.

The 2024 law stipulates that most aspects of the digital innovations introduced shall be governed by separate legal instruments and regulations. These include the modalities for issuing civil status documents in electronic form (Section 29(5)); methods of signatories and signature for electronically drawn marriage certificates (Section 41(2)); the conditions for access to data in the National Civil Status Database, and the issuance and certification of civil status documents from the NCSD (Section 79); the conditions for automated processing of civil status documents (Section 80); the features of and conditions for use and assigning of UPIN (Section 81 (3)); and the list administrations and procedure for access to data in the NCSD (Section 82(4)). The anticipated regulatory frameworks will possibly guarantee that all electronic communications conform to legal standards, mitigating the risk of fraud and ensuring the security of personal data. Furthermore, by opting for separate robust policy frameworks that regulate the functionalities of the new e-Governance model and the protection of individual rights, the law establishes a safe and structured milieu for civil registration. This emphasis on governance tools is crucial for establishing public trust in the system, as citizens will have a clearer picture of how their data is stored and accessed.

4.5. Technological infrastructure in Cameroon

Cameroon has recorded important strides in the ICT sector, particularly through adopting the National ICT Strategic Plan 2020 which acknowledges the digital economy as a key development catalyst²³. The country’s national optical fibre backbone of about 12000 km has

²³ Toussi, S. (2019, September 12). Overview of Cameroon’s Digital Landscape. CIPESA. <https://clck.ru/3Gf9m2>

linked 209 of the 360 subdivisions. Cameroon's Ministry of Post and Telecommunications revealed that by 2018, 83 % of Cameroonians had subscribed to mobile phone services, with an internet penetration rate of 35 %²⁴. According to ICT Development Index 2024, Cameroon currently ranks 31st out of 47 countries, with a score of 44.2²⁵.

The national ICT strategic plan 2020 covers 8 key areas, aligning with the Country's emergence vision by 2035. Some public institutions have been created to boost Cameroon's development of digital public service²⁶. Based on this institutional framework, some e-Governance initiatives have been undertaken to digitise and manage state employees, public finances, electoral register management, customs operations, and transport documents²⁷. Other e-Governance innovations are operational through introducing e-taxes, e-visa, and e-commerce and trade²⁸. As part of the Strategic Plan for the Rehabilitation of Civil Registration in Cameroon (2018–2022), a digitalisation plan for civil registration was designed in 2018 as a basis for the 2024 law on civil registration systems. The aim as per the master plan is to establish a platform connecting the civil status system and other segments, such as the national identity institution, Ministries of Justice, Transport and Health for effective service delivery.

5. Discussions

The paper aimed to investigate the electronic innovations introduced in the civil registration system of Cameroon by the new law of 23 December 2024, with emphasis on their implications for service delivery, governance and citizen participation. Employing a qualitative research design, the study examined existing literature, policy and legal documents to assess the effectiveness of the new e-Governance framework in the civil status registration sector. Thematic analysis was adopted to categorise major themes and challenges of the new law. The research revealed several relevant innovations introduced by the 2024 law, including concepts of digital certificates and qualified electronic certificates, the introduction of UPIN, electronic declaration of vital events, the adoption of electronic signatures and the creation of an NCSD. The automation

²⁴ Ministry of Posts and Telecommunication (2018). Posts, Telecommunications, and ICT: Precious assets of the seven-year mandate. <https://clck.ru/3Gf9pe>

²⁵ Ecofin agency. (2024, July 16). ICT Development Index 2024: Ranking of African Countries. <https://clck.ru/3Gf9tk>

²⁶ Telecommunications Regulatory Board (ART); the National Agency for ICT (ANTIC); and the National Centre for the Development of Computer Services (CENADI).

²⁷ Alypova, S. (2024). E-government Development in Cameroon. Centre for African Studies, HSE University. <https://clck.ru/3Gf9zu>

²⁸ Ibid.

of civil status operations and the publication of marriage banns online constitute other noteworthy novelties. These innovations align Cameroon's civil status registration system with the critical flow model of e-Governance. Also, the innovations fit into the G2G and G2C domains of e-Governance interactions.

The key findings demonstrate significant innovations contained in the new law but identify challenges with implementation linked to technology literacy rate, technological infrastructure and internet coverage in Cameroon which impact service delivery, and governance accountability. With regards to e-government, the United Nations e-government ranking 2024 places Cameroon at 155th out of 193 countries as opposed to 139th position in 2004, and 105th in e-participation with improvement from 84th position in 2004²⁹. With an internet coverage of less than 50 %, the country's Network Readiness Index in 2024 positions it at 113th out of 133 countries with recorded improvement in governance³⁰. While the demand for internet services constantly increases, the precious service is almost inaccessible in some rural areas.

One of the remarkable results is the creation of a National Civil Status Database to centralise and store civil status documents. This innovation is essential as the NCSD has the potential to improve data integrity record-storage culture and modernise access to valuable information. This finding is relevant in its potential to renovate civil status registration operations from a disjointed system into an interconnected, efficient system that addresses citizens' needs effectively. Automating civil status transactions further increases efficiency by mitigating bureaucratic delays and errors. Furthermore, introducing electronic declaration of vital events – births, marriages and deaths – reflects a remarkable paradigm change in the interaction between citizens and public services. This innovation shortens processing time, and increases accessibility, especially for marginalised segments of the population who may encounter challenges in the traditional declaration processes³¹. These transformations resonate with the TAM, which suggests that citizens accept technology based on its perceived ease of use and usefulness (Reiling & Contini, 2022).

The introduction of electronic certificates demonstrates a milestone towards safeguarding the authenticity and security of civil status documents. By exploiting digital signatures and encoding algorithms, the 2024 law aims to improve the integrity and trustworthiness of civil status documents in Cameroon. This innovation identifies

²⁹ UN E-Government Knowledgebase. <https://clck.ru/3GfA9A>

³⁰ Portulans Institute. (2024). Network Readiness Index 2024: Cameroon. <https://clck.ru/3GfABt>

³¹ Zewoldi, Y. (2019). Snapshot of Civil Registration and Vital Statistics in Cameroon. Centre of Excellence for Civil Registration and Vital Statistics. <https://clck.ru/3GfADM>

with the e-Governance theory's principle which highlights the transformative capabilities of ICTs in enhancing public service delivery (Heeks, 2006). Moreover, UPIN eases civil status records' archival, management and retrieval. The UPIN serves as a unique identifier for citizens, reorganising the registration operation and minimising duplication risks.

These results align with previous studies on the benefits of e-Governance in civil registration and other domains. For instance, studies from countries like Estonia and Kenya have demonstrated that centralised computerised systems can dramatically augment service delivery, and citizen fulfilment and reduce bureaucratic burdens (Tammpuu & Masso, 2018). Furthermore, Ghana's m-birth model justifies how digital birth registration can remarkably increase the declaration rate of vital events³². Likewise, by introducing e-Governance in civil registration processes, the Cameroonian legislator aims to improve the efficiency and accessibility of civil registration services to citizens and other institutions through centralised records, digital certificates and UPIN. The Cameroonian innovation in civil registration can pull vital lessons from these countries' successes, to guarantee the effective materialisation of its innovation through tailored regulatory frameworks. However, while scholars highlight the merits of e-Governance, they also emphasise the relevance of addressing infrastructure barriers, and possible public confrontation to the innovations³³.

The research findings resonate with the e-governance theory. This theory suggests that ICT incorporation into governance operations can improve transparency, accountability, and citizen participation (Heeks, 2006). The results echo this theory as the introduction of UPIN, electronic declarations of vital events, objections to marriage celebrations, electronic signatures for marriage solemnisation, and the electronic publication of marriage banns, all align with the principles of accessibility and transparency. Furthermore, the findings relate to TAM. TAM contends that apparent ease of use and perceived relevance significantly determine citizen's acceptance of technology (Davis et al., 1989). The new law seeks to ameliorate the ease of use of civil registration operations by automating transactions and implementing electronic declarations, signatures and certificates. The effective application of digital innovations in the civil registration system in Cameroon greatly relies both on the functionality of the system and how easily civil status personnel and citizens can access and use the new technologies. As such, if the population view the automated system as relevant and easy to use, they will likely welcome the innovations.

³² UNICEF. (2018). Assessment of the m-birth project in Ghana. <https://clck.ru/3GfAKK>

³³ Zungu, S. (2024). The use of monitoring and evaluation as an improving e-Governance for enhanced service delivery. Master thesis. University of Johannesburg.

Despite the remarkable findings on the potential of the 2024 law to reinforce the civil registration system's efficiency and accessibility, alternative analysis should be acknowledged. For instance, the success of the new computerised civil registration system may depend on the government's ability and willingness to ameliorate technological facilities and offer routine training to civil status registrars, secretaries, and other stakeholders involved in the chain. If these foundational factors are not handled appropriately, the projected results may not be as expected. Moreover, the breakthrough of the new law may be shaped by the regulatory mechanisms, the political will and the capacity of the government establishments to enforce the new law. Also, the prevailing digital gap in Cameroon poses a profound menace, especially between urban and rural areas. If the existing inequality in access technology is not addressed, digital innovations could inadvertently aggravate existing social disparities.

The research recognises some limitations. First, the dependence on secondary data may introduce prejudices, as it does not gather direct perspectives from the main actors in enforcing the innovative digital system in the new law. Moreover, the research focuses on a recently adopted legislation whose effective implementation is still pending the adoption of some regulatory frameworks. There is a lack of empirical data on user fulfilment and the effectiveness of the digital system as no research has been conducted on it so far. This restricts the possibility of concluding the practical successes of the digital innovations introduced.

Further research could engage an assessment of the long-term repercussions of digital innovations on the civil registration system in Cameroon. This could involve an empirical study to collect qualitative primary data from the main actors and users of the civil registration system, offering a profound understanding of citizen experience and domains for amelioration. Also, investigations into the intersection of ICTs and social inclusion could be essential in revealing how to guarantee that all citizens have access to, and gain from these innovations without discrimination.

6. Recommendations

To boost the enforcement and increase the effectiveness of digital innovations in the new civil registration law in Cameroon, several measures should be considered: The research findings on the rate of technological infrastructure in Cameroon present a need for improvement to ensure the success of e-Governance innovations. The government should capitalise on advancing and increasing internet connectivity, especially in rural and underserved localities. This also includes allocating ICT kits and other resources to all civil status centres to ease efficient data collection, management and transmission to the centralised repository. This will guarantee citizens' access to computerised civil

registration services, bridging the digital gap, as emphasised by the National Institute of Statistics³⁴.

Furthermore, the effective application of digital aspects of the new law requires that state employees and civil status staff are well-trained in using digital tools. Inclusive training programmes should be designed to improve their technical skills and acquaint them with the new processes. These skills improvement initiatives should be continuous to keep the staff informed on technological advancement and best practices in the domain. This will minimise resistance to transformation and ensure easy reception of the new systems³⁵. Also, regular monitoring and evaluation of the enforcement operation is essential for identifying difficulties and adopting appropriate adjustments. The government should institute a monitoring mechanism to track the new law's evolution and measure its influence on civil registration services. Systematic stakeholder feedback should be integrated to build up the system.

Equally, the new law contains some provisions requiring further regulations and guidelines for enforcement. The government should sequence the rapid design of these regulations to provide clear modalities on the procedures for electronic declarations, issuance of electronic certificates, the generation and issuance of UPIN, and the functioning of the NCSD, among others. This will guarantee reliability and compliance in all civil status centres (Heeks, 2006). The security of personal civil status data is essential for ensuring public trust in the innovative system. The government should integrate robust data protection strategies, including encryption, access restrictions, and routine audits with the NCSD, to secure sensitive data. Also, alignment with the personal data protection law should be strictly guaranteed. Through these mechanisms, the government will establish transparency and accountability in the enforcement process and readiness to address any issues connected to data security and privacy. Achieving these will build public trust and confidence in the system, guaranteeing its success and mitigating resistance.

Moreover, engaging stakeholders and educating the population are basic strategies for successfully implementing e-Governance innovations in the new civil status registration law. The key actors include state agencies, employees, civil society, and community leaders. They should be fully involved in the design of regulations, training policies, and monitoring mechanisms. Their involvement and feedback can offer valued perspectives and assist in addressing possible setbacks. Again, education

³⁴ National Institute of Statistics. (2023). Rapport sur les statistiques de l'état civil au Cameroun (2018–2022). <https://clck.ru/3Gf8Uq>

³⁵ Zewoldi, Y. (2019). Snapshot of Civil Registration and Vital Statistics in Cameroon. Centre of Excellence for Civil Registration and Vital Statistics. <https://clck.ru/3GfADM>

and sensitisation operations are essential to enlighten citizens about e-Governance innovations in civil status registration operations and their benefits. These campaigns should employ various communication media, including radio, television, social media, posters, community meetings, churches and other social gatherings to attain a wide audience. Clear and accessible information should inform the population about the significance of civil status registration, the associated rights and how to use the computerised system. In tandem with awareness campaigns, the government should adopt programmes that intensify digital literacy, mainly in rural and underserved zones to empower citizens to access digitised systems effectively.

Conclusion

This study has examined the digital innovations enshrined in the 2024 law governing the civil status registration system in Cameroon. The research demonstrates valuable insights into how these innovations can alter civil status registration processes. The introduction of electronic declaration of vital events, digital certificates, a Unique Personal Identification Number (UPIN), and the creation of the NCSB are crucial novelties that improve the efficiency, user-friendliness, and trustworthiness of civil status registration processes. These findings are chiefly remarkable as they highlight the potential of ICTs to transform public administration and strengthen service delivery. One of the main unexpected results of this research is that some key aspects of computerised innovations will only be implemented through modalities and procedures determined by regulations. These regulations have not been adopted and there is a likelihood of delay, which may undermine the full implementation of the digital innovations.

The paper's results are significant for civil status registration and public sector governance in Cameroon. By incorporating digital technologies, the new law modernises civil status registration operations, decreases bureaucratic foot-dragging, and increases the accuracy and trustworthiness of records. This can potentially ameliorate public service delivery efficiency and effectiveness, profiting citizens and government institutions. The study contributes to scholarly discourse by presenting an insightful assessment of digital innovations embedded in the new civil status registration law in Cameroon. While scholars have investigated the application of e-Governance in civil registration in other countries like Kenya, Ghana, South Africa and Estonia, there exists no research so far on the specific case of Cameroon. This paper fills this gap by assessing the unique challenges and opportunities associated with e-Governance in the new law and its potential influence on civil status registration operations. The outcomes highlight the need for further inquiry into the long-term bearings of e-Governance innovations and the factors influencing their success.

The study's results have crucial implications for the evolution of civil registration and public sector governance in Cameroon. The innovations have the potential to modernise and interconnect civil status registration processes in Cameroon, making them more efficient, accessible, and reliable. For policymakers and practitioners, the paper's recommendation on stakeholder involvement and public awareness creation demonstrates the need for a collaborative approach to enforcing the digital system. This will guarantee that citizens are educated and guided on accessing digital services. The study also highlights the importance of data security and privacy in implementing e-Governance. By ensuring personal civil status data protection, the new law aims to build public trust and confidence in the new system. This is crucial for successfully adopting digital civil registration services and the overall effectiveness of e-Governance initiatives.

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Цифровая трансформация системы регистрации актов гражданского состояния Камеруна: инновации в электронном управлении

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Ключевые слова

акт гражданского состояния,
государственная услуга,
законодательство,
защита данных,
Камерун,
право,
цифровая грамотность,
цифровые технологии,
электронное правительство,
электронное управление

Аннотация

Цель: исследование инновационных преобразований в сфере электронного управления, внедренных в систему регистрации актов гражданского состояния Камеруна в результате законодательных реформ 2024 года. Основное внимание уделяется оценке влияния этих преобразований на повышение эффективности управления, прозрачности, доступности услуг для граждан, а также на совершенствование статистического учета жизненно важных событий.

Методы: в работе использованы общенаучные методы анализа и синтеза, классификации, системный и функциональный подходы, а также формально-юридический и сравнительно-правовой методы.

Результаты: внедрение электронного декларирования актов гражданского состояния, создание Национальной базы данных и переход на электронные свидетельства способны существенно повысить эффективность и доступность услуг для населения. Однако авторы подчеркивают, что успешная реализация цифровых инноваций требует преодоления значительных барьеров, таких как недостаточная технологическая оснащенность, ограниченный доступ к Интернету и низкий уровень цифровой грамотности среди граждан. Эти вызовы делают необходимой разработку дополнительных механизмов регулирования и поддержки. Особое значение придается балансу между цифровизацией и обеспечением прав граждан в контексте электронной регистрации.

✉ Контактное лицо

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Научная новизна: заключается в предоставлении уникальных эмпирических данных о процессе цифровизации государственных услуг в Камеруне, что особенно актуально для стран глобального Юга, где подобные преобразования происходят медленно и фрагментарно. Исследование вносит значительный вклад в научную дискуссию, расширяя понимание моделей внедрения цифровых технологий через призму ожидаемой полезности и воспринимаемой простоты использования в условиях развивающихся стран.

Практическая значимость: состоит в разработке конкретных рекомендаций для законодателей, государственных служащих и других заинтересованных сторон. Авторы подчеркивают необходимость скорейшего принятия нормативной правовой базы, внедрения образовательных программ для сотрудников и граждан, а также обеспечения доступа к цифровым технологиям. Эти меры направлены на создание устойчивой инфраструктуры для эффективного перехода к электронным системам и повышение качества государственных услуг. Работа представляет собой важный вклад в изучение процессов цифровизации государственного управления, предлагая как теоретические выкладки, так и практические решения, которые могут быть адаптированы для других стран с аналогичными вызовами.

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