

Regulatory Challenges and Social Dynamics of Online Notary Practices: A Comparative Legal Study of Indonesia and Malaysia

***Satrio Abdillah^a, Norhasliza Ghapa^a, Maheran Makhtar^a**

^a Faculty of Law and International Relations, Universiti Sultan Zainal Abidin, Terengganu, Malaysia

*Corresponding author: si4717@putra.unisza.edu.my

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Abstract

This study examines the social challenges and technology adoption processes in online notarial practices in Indonesia and Malaysia during and after the COVID-19 pandemic. The study employed a qualitative approach, involving in-depth interviews and document analysis. The analysis tool used was NVivo 12 Plus for coding optimization. The novelty of this study lies in its cross-country comparative analysis, specifically examining the interrelationships between social dynamics, digitalization, and legal challenges in online notarial practices in Indonesia and Malaysia during and after the COVID-19 pandemic, a previously unstudied approach. The main findings of this study indicate that the transformation of notarial practices in Indonesia and Malaysia after the COVID-19 pandemic was significantly influenced by the interaction between social dynamics, digital literacy levels, and legal regulatory readiness. Indonesia faces challenges such as legal uncertainty, gaps in access to technology, and low trust in digital services. At the same time, Malaysia has demonstrated faster adaptation due to a clearer regulatory framework and greater acceptance of technology. Differences in legal systems (civil law and common law) also shape the flexibility with which online notarial practices can respond to digitalization, thereby affecting the validity, legitimacy, and sustainability of online notarial practices in both countries. The digital transformation of notarial practice demands greater legal certainty through clear, adaptable regulations to ensure the validity, security, and legitimacy of online notary services. Therefore, harmonizing cybernotary regulations and strengthening digital governance are necessary to ensure that technological innovation aligns with fundamental legal principles.

Keywords: Online Notary; Technology Adoption; Digital Transformation; Legal Framework; Regulatory Challenges; Cyber Notary Governance.

Abstrak

Penelitian ini mengkaji tantangan sosial dan proses adopsi teknologi dalam praktik notaris online di Indonesia dan Malaysia selama dan setelah pandemi COVID-19. Studi ini menggunakan pendekatan kualitatif, melibatkan wawancara mendalam dan analisis dokumen. Alat analisis dengan Nvivo 12 Plus untuk optimalisasi pengkodean. Novelty penelitian ini terletak pada analisis komparatif lintas negara yang secara khusus mengkaji keterkaitan antara dinamika sosial, digitalisasi, dan tantangan hukum dalam praktik notaris online di Indonesia dan Malaysia selama serta pasca pandemi COVID-

19, yang sebelumnya belum banyak diteliti secara terintegrasi. Temuan utama penelitian ini menunjukkan bahwa transformasi praktik kenotariatan di Indonesia dan Malaysia pasca pandemi COVID-19 dipengaruhi secara signifikan oleh interaksi antara dinamika sosial, tingkat literasi digital, dan kesiapan regulasi hukum. Indonesia menghadapi tantangan berupa ketidakpastian hukum, kesenjangan akses teknologi, serta rendahnya kepercayaan terhadap layanan digital, sementara Malaysia menunjukkan adaptasi yang lebih cepat karena didukung oleh kerangka regulasi yang lebih jelas dan tingkat penerimaan teknologi yang lebih tinggi. Perbedaan sistem hukum (civil law dan common law) turut menentukan fleksibilitas dalam merespons digitalisasi, sehingga berdampak pada validitas, legitimasi, dan keberlanjutan praktik notaris online di kedua negara. Dengan demikian, transformasi praktik notaris berbasis digital menuntut penguatan kepastian hukum melalui regulasi yang jelas dan adaptif guna menjamin keabsahan, keamanan, dan legitimasi layanan kenotariatan online. Oleh karena itu, diperlukan harmonisasi regulasi cyber notary serta penguatan tata kelola digital untuk memastikan bahwa inovasi teknologi berjalan sejalan dengan prinsip-prinsip hukum yang fundamental.

Kata Kunci: Notaris Online; Adopsi Teknologi; Transformasi Digital; Kerangka Hukum; Tantangan Regulasi; Tata Kelola Notaris Siber.

INTRODUCTION

The COVID-19 pandemic has changed the dynamics of many facets of life, such as social interaction with people, changes in work habits, the way services access, and people communicate.¹ The moves to contain the spread of the virus through various forms of social isolation and restrictions have led to significant changes across the board, with sectors from education to the economic sector using digital tech to remain operational.² This is not a shift solely seen during the pandemic;

¹ Miyang Luo et al., "COVID-19 Lockdown and Social Capital Changes Among Youths in China," *International Journal of Health Policy and Management*, 2021, 1–6, <https://doi.org/10.34172/ijhpm.2021.17>; José van Dijck and Donya Alinejad, "Social Media and Trust in Scientific Expertise: Debating the Covid-19 Pandemic in The Netherlands," *Social Media + Society* 6, no. 4 (2020): 1–11, <https://doi.org/10.1177/2056305120981057>; Lalgoulen Khongsai et al., "Combating the Spread of COVID-19 Through Community Participation," *Global Social Welfare* 8, no. 2 (2021): 127–32, <https://doi.org/10.1007/s40609-020-00174-4>.

² Pratim Datta and Joseph K. Nwankpa, "Digital Transformation and the COVID-19 Crisis Continuity Planning," *Journal of Information Technology Teaching Cases* 11, no. 2 (2021): 81–89, <https://doi.org/10.1177/2043886921994821>; Anne Yates et al., "High School Students' Experience of Online Learning during Covid-19: The Influence of Technology and Pedagogy," *Technology, Pedagogy and Education* 30, no. 1 (2021): 59–73, <https://doi.org/10.1080/1475939X.2020.1854337>; Sera Whitelaw et al., "Applications of Digital Technology in COVID-19 Pandemic Planning and Response," *The Lancet Digital Health* 2, no. 8 (2020): e435–40, [https://doi.org/10.1016/S2589-7500\(20\)30142-4](https://doi.org/10.1016/S2589-7500(20)30142-4).

rather, it spearheads post-pandemic when we rely more on technology for everyday living.³ Such a dependency speeds up the social transformation that comes with many new challenges, such as unequal access to technologies, differences in adaptability among individuals, and the need to adjust public policies accordingly, as these will have to sustain development in the long run.⁴

This change also involves alterations in the social dynamic with legal systems and notary professionals.⁵ Before the pandemic, people in Indonesia and Malaysia were accustomed to face-to-face interactions. During the pandemic, they had to adapt to online services, leading to uncertainty regarding the trust and security of the legal process.⁶ Inequality also arises due to differential access to technological

³ Igor Calzada, "Postpandemic Technopolitical Democracy: Algorithmic Nations, Data Sovereignty, Digital Rights, and Data Cooperatives," *Contributions to Political Science*, 2023, 97–117, https://doi.org/10.1007/978-3-031-08608-3_6; Jung Wen Hsia, "Factors Influencing Elementary Teachers' Satisfaction With Online Teaching in the Postpandemic Era in Central Taiwan," *Journal of Research in Education Sciences* 69, no. 1 (2024): 69–97, [https://doi.org/10.6209/JORIES.202403_69\(1\).0003](https://doi.org/10.6209/JORIES.202403_69(1).0003).

⁴ João Almeida and Ana Dias Daniel, "Post-Pandemic Opportunities for Low-Density Territories: Insights and Implications from Portuguese Case Studies," *European Planning Studies* 31, no. 10 (2023): 2034–57, <https://doi.org/10.1080/09654313.2022.2074785>; Alghifari Mahdi Igamo et al., "Factors Influencing Fintech Adoption for Women in the Post-Covid-19 Pandemic," *Journal of Open Innovation: Technology, Market, and Complexity* 10, no. 1 (2024): 100236, <https://doi.org/10.1016/j.joitmc.2024.100236>.

⁵ Arief Budiono et al., "Legal Protection of Vaccine Administration Health Service to Prevent the Spread of the Coronavirus Disease 2019 in Indonesia," *Open Access Macedonian Journal of Medical Sciences* 9 (2021): 1050–54, <https://doi.org/10.3889/oamjms.2021.7460>; Tze Chin Ong and Mei Fei Lee, "Competition Law in the E-Commerce Platforms Market Post-Pandemic: A Comparative Analysis of the European Union, China, and Malaysia," *Law and Development Review*, 2024, 2024, <https://doi.org/10.1515/ldr-2024-0035>; Ridwan Khairandy et al., "The Use of Electronic Media as an Innovation in Law by the Notary in Handling Agreement and Contracts: The Role of Electronic Information and Transactions (ITE) Law in Indonesia's E-Commerce," *International Journal of Applied Engineering and Technology (London)* 4, no. 1 (2022): 128–34.

⁶ Arsa Ilmi Budiarti, Dio Ashar Wicaksana, and Nanda Oktaviani, "The Role of Technology in the COVID-19 Pandemic Era: A Lesson Learned from Indonesia in Increasing Access to Legal Aid," *Journal of Contemporary Sociological Issues* 3, no. 1 (2023): 1, <https://doi.org/10.19184/csi.v3i1.27710>; Harlida Abdul Wahab, Siti Suraya Abdul Razak, and Nik Ahmad Kamal Nik Mahmud, "Legal Issues in Working From Home Amid Covid-19 Pandemic in Malaysia," *UUM Journal of Legal Studies* 13, no. 2 (2022): 163–86, <https://doi.org/10.32890/uumjls2022.13.2.7>.

advancements and digital services. When most of the population does not yet have digital means, this will drastically affect the equality of services. Moreover, the notary profession is also changing, with a growing demand for digital skills and comprehension of new laws that are more adaptable while legally binding.⁷

In a post-COVID world, various industries across the globe are making a rapid shift to continue to serve the essential functions they perform, and the legal sector is a part of this transition as well. Many jurisdictions have, for instance, started including virtual hearings in their justice system as a substitute for scarce in-person court proceedings during the pandemic⁸. In the UK, the Supreme Court and local courts have opted for online hearings to keep the legal process moving, even in cases that depend on investigating evidence or testimony.⁹ The same trend is evident in the United States, where numerous State, and federal courts are beginning to embrace technology for virtual hearings, facilitating the processing of cases and reducing delays.¹⁰

In Indonesia and Malaysia, notaries have a role in legal practice and services as public officials authorized to make authentic legal agreements and services of law relating to transactions or agreements that require a guarantee of validity. Notaries are now part of important aspects of Indonesian law; in making agreements relating to land, business agreements, and inheritances, notaries also function as witnesses in various legal transactions. Notaries in Malaysia have similar responsibilities, concentrating on the preparation of agreements and the authentication of documents in legal cases and commercial dealings. Notaries' primary purpose in both countries is to ensure legal

⁷ Isa Anshari Arif and Nynda Fatmawati Octarina, "Urgency Of Cyber Notary Application In The Pandemic Of COVID-19 For The Need Of Authentic Deed," *YURISDIKSI : Jurnal Wacana Hukum Dan Sains* 1, no. 1 (2020): 93–108.

⁸ Ginevra Peruginelli, Sara Conti, and Chiara Fioravanti, "COVID-19 and Digital Library Services: An Overview on Legal Information," *Digital Library Perspectives* 37, no. 1 (2021): 65–76, <https://doi.org/10.1108/DLP-07-2020-0064>; Wesley G. Jennings and Nicholas M. Perez, "The Immediate Impact of COVID-19 on Law Enforcement in the United States," *American Journal of Criminal Justice* 45, no. 4 (2020): 690–701, <https://doi.org/10.1007/s12103-020-09536-2>.

⁹ Adam McCann, "Virtual Criminal Justice and Good Governance during Covid-19," *European Journal of Comparative Law and Governance* 7, no. 3 (2020): 225–29, <https://doi.org/10.1163/22134514-00703001>.

¹⁰ Michael Legg, "The COVID-19 Pandemic, the Courts and Online Hearings: Maintaining Open Justice, Procedural Fairness and Impartiality," *Federal Law Review* 49, no. 2 (2021): 161–84, <https://doi.org/10.1177/0067205X21993139>.

certainty by authenticating the documents they draft.¹¹ In Indonesia and Malaysia, the notary profession faced challenges during the pandemic, one of which was focusing on conducting its duties online. Social isolation pressures law notaries to switch to digital technology for signing agreements, which also causes issues with regulation and transaction security.¹²

The core issue in this study also lies in the tension between the need to digitalize notarial services and the principle of legal certainty, the primary foundation of the notarial profession in Indonesia and Malaysia. The shift to online practice raises fundamental issues related to the validity of authentic deeds, verification of the parties' identities, and the legitimacy of electronic signatures within a legal framework still fundamentally designed for face-to-face interactions. In this context, this study's scientific argument emphasizes that digital transformation in notarial practice cannot be understood simply as a technological adaptation but must be positioned as a process of reconstructing notarial law that demands harmonization between regulations, technology, and social practices. Without a clear and integrated legal framework, digitalization has the potential to weaken the notary's role as guardian of legal validity and certainty. Therefore, a normative approach that emphasizes digital governance-based regulatory reform is needed to ensure that technological innovation remains aligned with the principles of authenticity, security, and legal protection in notarial practice in the post-pandemic era.

The study gap in this study relates to the absence of detailed comparative studies regarding online notary practices between Indonesia and Malaysia. Such studies have not yet been realized, especially regarding social changes and their impact on online notary

¹¹ Trubus Wahyudi and Ong Argo Victoria, "The Comparison Notary in Indonesia & Malaysia with Two Differences Law System (Civil Law & Common Law)," *Jurnal Akta* 9, no. 4 (2022): 472–91, <http://dx.doi.org/10.30659/akta.v9i4.28784>; Satrio Abdillah, Norhasliza Ghapa, and Maheran Makhtar, "A Comparative Study Between Indonesia and Malaysia on the Role of Notaries and Advocates," *Jurnal Usm Law Review* 6, no. 3 (2023): 943, <https://doi.org/10.26623/julr.v6i3.7853>.

¹² Rais Firdaus Handoko and Budi Santosa, "Role of Notary in Capital Market: Making GMS Minutes Online During Covid-19," *Jurnal Akta* 7, no. 4 (2020): 365, <https://doi.org/10.30659/akta.v7i4.12893>; Hua Siong Wong and Mohd Munzil Muhamad, "Electronic Signature and Attestation in Conveyancing Practice: A Malaysian Legal Perspective," *F1000Research* 11 (2022): 325, <https://doi.org/10.12688/f1000research.73548.3>.

practices during and after the COVID-19 pandemic. Solve Online Notarizations Problem Using, as mentioned earlier, a broad approach, various studies have explored technology adaptation in the legal profession in general. However, no studies focus on the challenges and solutions that notaries deal with when doing their jobs online across both jurisdictions. This study provides the novelty in analyzing the social dynamics emerging from this transitional stage. It compares the dynamics of ensuring the security, legitimacy, and sustainability of the practice of notaries in Indonesia and Malaysia in the era of digitalization.

This study intends to elaborate on how the practice of notaries in Indonesia and Malaysia has changed to the existing conditions amidst and after the Covid-COVID-19mic, a combination of technology or digitalization and social dynamics indirectly into the practice of notaries. This study seeks to uncover and answer three main questions: How do patterns related to social dynamics, such as the changes in interaction during and after the pandemic, shape notary practices in Indonesia and Malaysia? Second, what are the social dynamics and challenges in supporting online notary practices in Indonesia and Malaysia? The urgency of this research for Indonesia and Malaysia lies in the need to ensure legal certainty in online notarial practices amid accelerated digitalization post-pandemic. Furthermore, both countries need to formulate adaptive policies and regulations to guarantee the security, legitimacy, and equitable access to digital-based notarial services.

The significance of this research lies in its contribution to clarifying and strengthening the legal framework for notaries amid accelerated post-pandemic digitalization, particularly regarding legal certainty in online notarial practices in Indonesia and Malaysia. By comparatively examining the challenges of authentic deeds, identity verification, and the legitimacy of electronic signatures, this research provides an analytical basis for developing regulations that are more adaptive and responsive to technological change. Furthermore, this study plays a crucial role in bridging the gap between conventional legal practices and the needs of digital services, thus serving as a reference for policymakers in formulating legal reforms that guarantee security, legitimacy, and legal protection in digital-based notarial practices.

LITERATURE REVIEW

Social dynamics describes the evolution of structures in society and how individuals influence and are influenced by them; this is

governed by factors ranging from technology to culture and economics.¹³ Social dynamics is a concept that describes how society reacts to the changes in it (internal) and outside of it (external). To illustrate, social changes caused by the evolution of digital technologies have transformed how we interact with one another, work, and perform routine tasks. This is due to the phenomenon whereby online platforms are increasingly used in different aspects of life, ranging from education to the economy.¹⁴ Here are the social dynamics of how society accepts or rejects these changes and what influences the acceptance or rejection of new technology.

The extent to which people embrace social change brought by technological advances is subject to cultural values, social norms, and how digitally literate a society is.¹⁵ More innovation-friendly societies react more rapidly to new technologies, while more conservative or traditionally saturated groups react sluggishly to changes of this kind.¹⁶ Also, social inequality is just as significant inside the social dynamic, which has access well before the technology between city and country or carrying unique study levels. Such inequality can result in technological acceptance gaps and limit a more inclusive social transformation

¹³ Andrew B. Moynihan, Ana Guinote, and Eric R. Igou, "Relational Dynamics and Meaning in Life: Dominance Predicts Perceived Social Support, Belongingness, and Meaning in Life," *Personality and Individual Differences* 211 (2023): 112249, <https://doi.org/10.1016/j.paid.2023.112249>; Guilhem Lecouteux and Léonard Moulin, "Cycling in the Aftermath of COVID-19: An Empirical Estimation of the Social Dynamics of Bicycle Adoption in Paris," *Transportation Research Interdisciplinary Perspectives* 25 (2024): 101115, <https://doi.org/10.1016/j.trip.2024.101115>; Fatmawati et al., "Transformation of Women's Leadership in Pesantren from Fiqh Siyāsah Perspective: Social Dynamics in the Patriarchal Culture of South Sulawesi," *Samarah* 8, no. 3 (2024): 1800–1817, <https://doi.org/10.22373/sjkh.v8i3.18647>.

¹⁴ Loris Caruso, "Digital Innovation and the Fourth Industrial Revolution: Epochal Social Changes?," *AI and Society* 33, no. 3 (2018): 379–92, <https://doi.org/10.1007/s00146-017-0736-1>.

¹⁵ Hongda Liu, Haifeng Zhao, and Shiyuan Li, "Future Social Change of Manufacturing and Service Industries: Service-Oriented Manufacturing under the Integration of Innovation-Flows Drive," *Technological Forecasting and Social Change* 196 (2023): 122808, <https://doi.org/10.1016/j.techfore.2023.122808>; Isabella et al., "Empowering Digital Citizenship in Indonesia: Navigating Urgent Digital Literacy Challenges for Effective Digital Governance," *Journal of Governance and Public Policy* 11, no. 2 (2024): 142–55, <https://doi.org/10.18196/jgpp.v11i2.19258>.

¹⁶ Chuka N. Emezue et al., "Rural Young Males' Acceptance & Receptiveness to Technology-Based Interventions for Dating Violence Prevention: A Qualitative Descriptive Study," *Journal of Adolescence* 92 (2021): 137–51, <https://doi.org/10.1016/j.adolescence.2021.08.012>.

process.¹⁷ Consequently, understanding these social dynamics is crucial for developing policies that can enable better, more equitable technology adoption in society.

Legal practices or services are also correlated to the social dynamics of the COVID-19 pandemic. The pandemic caused many changes not only in our everyday lives but also in the legal sector worldwide, as more and more people had to stay remote due to physical restrictions to prevent the virus (COVID-19) from spreading. This resulted in legal practices conventionally conducted in person with direct meetings and face-to-face processes, like court hearings and consultations with lawyers, moving onto online platforms.¹⁸ There is an increasing trend of adoption of digital technology, including virtual hearings and electronic signatures by courts and other legal institutions, to ease the process of legal procedures.¹⁹ This transition to digital not only allows for the maintenance of legal services during the pandemic but also creates possibilities for enhancing efficiency and accessibility for those who struggle to access legal services physically.

While the adoption of technology in legal practice is speeding up, social and cultural challenges are putting a roadblock in the way. For example, many clients and legal practitioners question the authenticity and security of virtual legal processes, including electronic signatures.²⁰ The use of technology is still stagnant due to reliance on face-to-face conversations that seem more reliable, such as trust issues in tech, and

¹⁷ Aarushi Bhandari, “Gender Inequality in Mobile Technology Access: The Role of Economic and Social Development *,” *Information Communication and Society* 22, no. 5 (2019): 678–94, <https://doi.org/10.1080/1369118X.2018.1563206>.

¹⁸ Joe McIntyre, Anna Olijnyk, and Kieran Pender, “Civil Courts and COVID-19: Challenges and Opportunities in Australia,” *Alternative Law Journal* 45, no. 3 (2020): 195–201, <https://doi.org/10.1177/1037969X20956787>; Michael Fore and Erin Stevenson, “The Impact of Covid-19 Pandemic on Overall Well-Being of Practicing Lawyers,” *PLoS ONE* 18, no. 3 March (2023): 1–19, <https://doi.org/10.1371/journal.pone.0282836>; Julie Marie Baldwin, John M. Eassey, and Erika J. Brooke, “Court Operations during the COVID-19 Pandemic,” *American Journal of Criminal Justice* 45 (2020): 743–58, <https://doi.org/10.1007/s12103-020-09553-1>.

¹⁹ Wong and Muhamad, “Electronic Signature and Attestation in Conveyancing Practice: A Malaysian Legal Perspective”; Baldwin, Eassey, and Brooke, “Court Operations during the COVID-19 Pandemic.”

²⁰ David López Jiménez, Eduardo Carlos Dittmar, and Jenny Patricia Vargas Portillo, “The Trusted Third Party or Digital Notary in Spain: Effect on Virtual Transactions,” *International Review of Law, Computers and Technology* 36, no. 3 (2022): 453–69, <https://doi.org/10.1080/13600869.2021.2004760>.

are considered barriers to acceptance of this technology, particularly among the older generation or those with no access to tech. However, the COVID-19 pandemic has hastened technology's embrace in the legal space, leading to long-lasting shifts that will make the system more flexible, efficient, and accessible to more people.

In the larger context, social dynamics indicate this tension on how society adapts to externally influenced forces like technology and culture. The COVID-19 pandemic further accelerated digital transformation worldwide, leading to an overhaul in various sectors, including the legal sector, which now engages in online legal practice. However, social and cultural determination and unequal technological access hinder accepting such changes. So, it is critical to understand these dynamics at the social level so that policies supporting technology adoption can be implemented horizontally and inclusively, making the entire system more agile and effective and creating the conditions for every population segment to access it.

From the perspective of legal certainty theory, social dynamics driven by digitalization require clear legal certainty in every technology-based legal service practice, including the validity of electronic documents, identity verification, and the legitimacy of digital signatures.²¹ The relationship between law and technology demonstrates that technological developments not only transform how legal services operate but also necessitate adapting norms and regulations to ensure justice, security, and public trust.²² Meanwhile, within the framework of digital governance, the state plays a strategic role in designing policies, infrastructure, and supervisory systems to ensure that digital transformation in the legal sector is conducted in an accountable, inclusive, and sustainable manner.²³ Therefore, understanding social

²¹ I Permadi, "Electronic Title Certificate as Legal Evidence: The Land Registration System and the Quest for Legal Certainty in Indonesia," *Digital Evidence and Electronic Signature Law Review* 20 (2023): 47–61, <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85166181964&partnerID=40&md5=026f9cc519bafdc10043a0af4b93e170>.

²² E Saputra Hasibuan and A Nur Rohman, "Scientific Crime Investigation and Police Reform in Indonesia: Integrating Technology, Law, and Islamic Ethics for Institutional Transformation," *Legal Transformation in Muslim Societies* 2, no. 3 (2025): 18–36, <https://www.scopus.com/inward/record.uri?eid=2-s2.0-105023512076&partnerID=40&md5=7086c366f0993ba67a3e158ffe9ddecd>.

²³ Isabella et al., "Bridging E-Government With Digital Literacy: A Literature Review," *Journal of Governance and Regulation* 14, no. 1 (special issue) (2025): 361–71, <https://doi.org/10.22495/jgrv14i1siart12>.

dynamics cannot be separated from the need to integrate legal certainty, technological innovation, and effective digital governance to address emerging challenges and ensure the legitimacy of legal practices in the digital era.

In the context of technology adoption in legal services, the acceleration of digitalization in the post-pandemic period has driven significant transformation, with legal practices increasingly relying on digital platforms for efficiency and accessibility.²⁴ However, this development raises critical issues related to the legality of cyber notarization, particularly regarding the validity of electronically executed authentic deeds, the legitimacy of digital signatures, and identity verification mechanisms in virtual environments. At the same time, the concept of digital trust and legal certainty becomes crucial, as the success of technology adoption in legal services largely depends on public confidence in the security of digital systems and the legal assurances provided by the state.²⁵ Without a strong foundation of trust and legal certainty, digital transformation may instead generate new forms of uncertainty in notarial practice.

Although various studies have examined digitalization in the legal sector, significant critical gaps remain inadequately addressed, particularly the lack of cross-country legal comparisons that specifically analyze online notary practices in Indonesia and Malaysia. In addition, there is still a lack of socio-legal integration, as many studies tend to focus solely on normative or technological aspects without comprehensively linking them to the social dynamics that influence legal implementation. Therefore, this study is important for filling these gaps by integrating legal and social analysis simultaneously to provide a more comprehensive and relevant understanding of the transformation of notarial practices in the digital era.

RESEARCH METHODS

This study employs a qualitative, comparative socio-legal design to gain an in-depth understanding of how notarial practices in Indonesia

²⁴ K Michalakopoulou et al., "Innovation in the Legal Service Industry: Examining the Roles of Human and Social Capital, and Knowledge and Technology Transfer," *International Journal of Entrepreneurship and Innovation* 25, no. 4 (2024): 248–62, <https://doi.org/10.1177/14657503221119667>.

²⁵ N I Solovyanenko, "Exercise of The Rights Of Individuals And Legal Entities In The Use of Electronic Signatures As A Condition Of Trust In The Digital Environment," *Gosudarstvo i Pravo* 2022, no. 11 (2022): 192–96, <https://doi.org/10.31857/S102694520022777-5>.

and Malaysia have adapted during and after the COVID-19 pandemic. This approach is chosen because it allows integrating normative legal analysis (regulatory frameworks and legal principles) with empirical realities (social dynamics and technological adoption) in notarial services. Accordingly, the study does not merely examine procedural changes but also explores how social transformation, levels of technological acceptance, and legal implications interact in shaping digital-based notarial practices.

Methodologically, the study utilizes two primary data collection techniques: in-depth interviews and document analysis. Interviews are conducted using purposive sampling to select key informants directly involved in notarial practice, including active notaries, administrators of notary professional organizations, and stakeholders involved in the regulation and supervision of notarial services in both countries. This sampling strategy ensures that the selected informants possess relevant knowledge and experience regarding technological adaptation, online practice challenges, and regulatory changes during the pandemic.

In addition, document analysis is undertaken to complement and validate the empirical findings derived from interviews. The documents examined include statutory regulations, government policies, technical guidelines on notarial practice, and relevant academic publications addressing the impact of the pandemic on legal services. This analysis aims to identify regulatory developments, policy directions on digitalization, and the legal frameworks governing the use of technology in notarial practice, thereby enabling a comprehensive comparison between Indonesia and Malaysia.

All collected data are then analyzed using NVivo 12 Plus software to facilitate systematic thematic coding. Through this process, the data are organized into key themes, including social dynamics, technology adoption, legal challenges, and regulatory comparisons between the two jurisdictions. The analysis is conducted iteratively to identify patterns, relationships, and significant differences, enabling a deeper understanding of how legal and social factors interact to shape notarial practices in the digital era.

Finally, the findings are interpreted through a comparative legal perspective, taking into account the differing characteristics of Indonesia's and Malaysia's legal systems in responding to digital transformation. This approach enables the study not only to identify similarities and differences in practice but also to explain their legal implications for legal certainty, validity, and sustainability of online

notarial services. With this systematic and integrative methodological framework, the study aims to provide robust analytical contributions and normative recommendations for the development of notarial practices in the digital age.

RESULT AND DISCUSSION

Legal Validity and Recognition of Electronic Notarial Acts

This section examines the legal validity and recognition of electronic notarial acts in Indonesia by analyzing how social dynamics during and after the COVID-19 pandemic have shaped notarial practices. Table 1 presents the relationship between changing patterns of social interaction and their impact on the adaptation of notary services in the digital context.

Table 1. The influence of social dynamics on notary practices in Indonesia during and after the pandemic

Social change	During the Pandemic	Post-pandemic
Changes in Social Interaction Patterns between Notaries and Clients	• They physically distance to avoid in-person meetings. • Online platforms (video calls, communication applications) usage up. • Clients have to change with technology.	• Many clients continue to use online platforms even after restrictions were lifted because of the convenience and efficiency. • The society is used to online services.
Access Notary Services	• Notaries move their services to online platforms and sign documents electronically. • A lot of notaries and clients are not fully adapted to this transition.	Face-to-face services are beginning to recover, though online services continue to be the effective option of choice.
Public Perception of Digital Technology	• Fear and confusion about how technology can be used in notarization. • Adoption is hindered by uncertainty about the safety and legality	• Perception is an incremental change. • Younger generations are still utilizing online services, though some age ranges are wary.

	of electronic signatures.	• As regulations become stricter, awareness is rising
Technology Adoption in Notary Practice	• As the urgent need for electronic signatures and digital documents is increasing. • Then, there are a lot of issues with the lack of established regulation.	• After supportive regulations exist, technology usage will become more embedded. • Difficulties persist among older and conservative clients.
Client Trust in the Online Process	• Especially older clients still have low trust in the security and legality of electronic signatures.	• Trust begins to increase with clear regulations and higher legal awareness. • Other groups still require time to trust the online process completely

During the pandemic, the most significant social change in Indonesia was physical restrictions that decreased face-to-face meetings between notaries and clients. This requires most notaries to adopt technology to communicate with clients, such as through video calls or other online applications. Clients previously hesitant to embrace tech are now being forced to do so. It is post-pandemic, and although we can return face-to-face, many clients continue with online platforms. As this effect is not limited to a temporary impact of the pandemic, it reflects long-term changes in social interaction systems within this sector. These habits are seen to be easier and decrease the frequency of face-to-face meetings.

Notary services have also been revolutionized. During the pandemic, notaries and clients struggled to sign documents or use administrative engagements or online services. Many were not technically or habitually prepared at first. Face-to-face services are beginning to start again, but due to the pandemic, online services are now a key alternative. This indicates that the technological aspect has become crucial in remote notary service, allowing the client a time economy and convenience.

The pandemic has also changed glossed over people's view of digital technology. In the first stages of the transition, concerns over data security and the probability of electronic signatures were the most

significant challenges. However, Slowly, people’s views toward this phenomenon have changed, especially in the young, technology-savvy generation. Stricter regulations and improved education post-pandemic have increased public confidence in employing digital technology in notarial practice. However, the older age groups are becoming questioned because their Kyra is still high towards online processes.

As the pandemic necessitated continued service provision, there was a jump in notary practices adopting technology. However, there are still many hurdles to overcome, not least of which is the absence of data protection against the use of electronic documents and electronic signatures. More stringent regulations also supported adopting this technology in a post-pandemic society. However, a challenge remains: how to bring all incredibly conservative and uneducated clients into this digital process so that all parties can utilize notarization.

The pandemic has made trust in online processes a key issue. Worries about the security of electronic signatures and the legal validity of online processes dissuade some clients — particularly older ones — from using them. However, early in the pandemic, with vaguer regulations and broader outreach, online services have been relied on widely, and trust is now higher. Complete trust takes longer to develop, most notably with traditional clients. The issue of trust is crucial since its perceived safety will establish whether the technology can be sufficiently disseminated in notarial practice in the future.

Table 2. The influence of social dynamics on notary practices in Malaysia during and post-pandemic

Social Change	During the Pandemic	Post-pandemic
Changes in Social Interaction Patterns	• Reduced interpersonal contact due to physical distancing. • Government support accelerated the implementation of online platforms.	• Online services remain popular, especially with younger clients. • In-person services are getting rarer and rarer in favour of online alternatives.
Access Notary Services	• Significant move to online platforms — for signing, and also consultation.	• Regulation and efficiency are sparking the dominance of online services.

	Regulating the use of digital technology is also known, and the government has made it clear.	In some cases, face-to-face services are being used, but most are continuing to move online.
Public Perception of Technology	- The more someone is digitally literate, the more they are open to these platforms online. - Some age groups are still skeptical, but more open than in Indonesia.	- The young still brave services — older age groups still prefer face-to-face. - Public awareness with enhancement in technology education.
Technology Adoption	- Electronic signature rules are clear which means adoption is faster. - It is more structured and widely adopted digitalization process.	- The use of technology is becoming more solidified, supported by regulations and legal awareness. - The most technologically reluctant clients, particularly those on the conservative side, still have some challenges.
Client Trust in the Online Process	- The general public trusts electronic signatures more about the security and legality. - Online processes maintained support trust due to strict regulations	- Building trust requires clear regulations and raising awareness about the technology benefits. - Clients think the online method is simpler and safer

The pandemic brought significant changes to notary practices in Malaysia, as face-to-face interactions were limited due to the physical restrictions imposed during that time. The Malaysian government is proactively aiding the regime shift, facilitating the notarial transition to online platforms to occur more rapidly. Those skeptical clients also ultimately adjusted if it was out of necessity, especially with the ease of

video calls or virtual consultations. Online services are still in demand even after the pandemic, primarily by the youths who have grown up with technology. With the convenience and efficient service offered, face-to-face service is becoming less of an option.

Notary services are also experiencing significant changes. Due to the pandemic, many services have transitioned online, and electronic document signing is included. There is precise regulation to support this change by the Malaysian government, while several other countries continue with legal ambiguity. Post-pandemic, online platforms became the preferred option when face-to-face services resumed due to their efficiency and convenience. Regulations that are supportive increase the level of public trust in these online services.

Malaysia is relatively far ahead of many other Southeast Asian countries in terms of public perception of technology. Those who sail through their courses with a high level of digital literacy also adapt to online platforms okay during the pandemic. However, specific age groups, especially older ones, remain less confident in technology. The post-COVID-19 world Tech education and experiences during the pandemic continue to drive widespread acceptance of online services, but more conservative groups demonstrate a slower acceptance of newer services.

In Malaysia, notary practices adopted technologies rapidly during the pandemic. Since electronic signature regulations are now well established, many notaries can immediately transition to digital processes. This digitalization process covers document signing, document management, and Communication with clients. This technology is being developed post-pandemic to integrate better and be distributed. Still, hurdles remain, particularly when getting more traditional or less tech-adept clients on board.

Another major factor in this transition's success is client trust in the online process. Trust levels increased during the pandemic due to rigorous regulations and effective government communications. This ensures that obtaining online is safe and legal, which calms anyone's apprehensions. This trust continues to broaden post-pandemic as regulation gets stronger and public awareness of the upsides of online services increases. While some clients still require the complete adaptation, many are already used to online services as being more convenient and secure.

The pandemic has brought significant changes to notary practices in Indonesia and Malaysia through social dynamics that changed

interaction patterns, service access, and technology adoption. The pandemic brought about physical restrictions, leading to online services, including electronic signatures and virtual consultations, that were met with public doubts about their legality and security. However, it is the case that many of these newly adopted habits are here for the long haul as the pandemic winds down, and these habits represent a long-term shift in how notary services are provided that is both efficient and tech-based.

Regulatory readiness and digital literacy levels differentiate the two nations' systems. Supportive regulatory guidance and high digital literacy facilitated transfer in Malaysia, while limitations in Indonesia's initial regulatory structure slowed technology adoption. However, the view of online services in Indonesia and Malaysia has proved more positive after the pandemic particularly among the younger generation. These shifts hint at the need for notaries to innovate and adapt their practice to fit a society increasingly used to technology's convenience.

The findings demonstrate that the transformation of notarial practices in Indonesia and Malaysia during and after the pandemic is not merely driven by social dynamics, but is fundamentally shaped by differences in their legal systems and regulatory readiness. Indonesia, operating under a civil law system, tends to rely on formalistic procedures and explicit statutory provisions, which initially slowed the adoption of digital notarial practices due to regulatory rigidity and legal uncertainty. In contrast, Malaysia's common law orientation allows for greater flexibility in interpretation and adaptation, supported by clearer regulatory frameworks for electronic signatures and digital processes. As a result, Malaysia experienced a faster, more structured transition toward online notarial services, while Indonesia faced challenges stemming from legal ambiguity, trust deficits, and uneven digital literacy. These differences highlight that the pace and effectiveness of digital transformation in notarial practices are closely linked to the adaptability of legal systems and the clarity of regulatory frameworks governing technological use.

Furthermore, the comparative analysis reveals important legal consequences arising from digital adoption in notarial practices, particularly concerning the validity, authenticity, and enforceability of electronic notarial acts. While both countries have increasingly embraced digital platforms, unresolved issues remain regarding identity verification, data security, and the legal recognition of electronic documents within existing legal frameworks. The shift toward digital services, although enhancing efficiency and accessibility, also introduces

risks that may undermine legal certainty if not adequately regulated. Therefore, strengthening regulatory harmonization, improving digital governance, and enhancing public trust are essential to ensure that technological innovation aligns with core legal principles. Ultimately, the sustainability of online notarial practices in both Indonesia and Malaysia depends on their ability to balance technological advancement with robust legal safeguards that uphold the integrity and legitimacy of notarial functions.

Regulatory Divergence between Indonesia and Malaysia

The regulatory differences between Indonesia and Malaysia regarding notarial practices reflect each country’s legal system and its level of preparedness for the digitalization of legal services. Indonesia tends to maintain a formalistic approach based on civil law,²⁶ while Malaysia demonstrates greater flexibility through a common law approach that adapts to technological developments.²⁷ This divergence has direct implications for the speed of adoption, legal certainty, and public trust in digital-based notarial practices in both countries.

Table 3. Regulatory Divergence between Indonesia and Malaysia in Notarial Practice

Regulatory Aspect	Indonesia	Malaysia
Legal System	Civil Law (based on codification and high formalism)	Common Law (flexible and precedent-based)
Notary Regulatory Framework	Strictly regulated by statutory law (Notary Law/UU Jabatan Notaris)	More dispersed across various regulations and legal practices
Recognition of Electronic Signatures	Recognized, but implementation in notarial deeds remains limited	More clearly regulated and operational in legal practice
Legal Certainty of Online Notaries	Relatively low due to the absence of comprehensive specific regulations	Higher due to adaptive and supportive regulatory frameworks

²⁶ D Latifian et al., “Can Advocates’ Legal Culture in Civil Law Enforcement Drive Reform in Indonesia’s Modern Justice System?,” *Journal of Law and Legal Reform* 5, no. 3 (2024): 913–42, <https://doi.org/10.15294/jllr.v5i3.12988>.

²⁷ K H Ng and B Jacobson, “How Global Is the Common Law? A Comparative Study of Asian Common Law Systems - Hong Kong, Malaysia, and Singapore,” *Asian Journal of Comparative Law* 12, no. 2 (2017): 209–32, <https://doi.org/10.1017/asjcl.2017.17>.

Flexibility in Technology Adoption	Tends to be slower, awaiting clear normative legal certainty	Faster due to more flexible legal interpretation
Government Support for Digitalization	Still developing and unevenly distributed	More structured and proactive
Level of Public Trust	Varies, influenced by digital literacy and regulatory clarity	Relatively higher due to clearer legal frameworks
Main Challenges	Legal gaps, digital divide, and social resistance	Resistance among older generations and limited technological adaptation in certain groups

Regulatory divergence between Indonesia and Malaysia in notarial practice reflects deeper structural differences rooted in their respective legal systems, which in turn shape how each country responds to digital transformation. Indonesia’s civil law tradition emphasizes codification, procedural formalism, and strict compliance with statutory provisions, making any shift toward digital notarial practices highly dependent on explicit legal authorization. In contrast, Malaysia’s common law system allows for greater interpretative flexibility, enabling legal actors and institutions to adapt more quickly to technological changes even in the absence of highly detailed statutory regulation. This foundational difference explains why Malaysia appears more responsive in integrating digital elements into legal services, including notarial functions, while Indonesia takes a more cautious, gradual approach.

From a regulatory framework perspective, Indonesia’s notarial system is governed by a centralized, formal legal instrument that provides strong legal certainty in conventional settings but becomes a constraint in times of rapid change, such as during the pandemic. The absence of detailed provisions specifically addressing online notarization creates ambiguity, particularly regarding the legality of electronic deeds and remote authentication processes. Conversely, Malaysia benefits from a more dispersed yet functionally adaptive regulatory environment, where multiple legal instruments and administrative guidelines collectively support the use of digital tools, including electronic signatures. This regulatory adaptability enhances the operational feasibility of online legal services and reduces uncertainty for both practitioners and clients.

The divergence is further evident in the recognition and implementation of electronic signatures and digital documents within

notarial practice. Although both countries formally acknowledge electronic signatures, their practical application differs significantly. In Indonesia, the integration of electronic signatures into notarial acts remains limited due to unresolved legal interpretations concerning authenticity and evidentiary value. Meanwhile, Malaysia demonstrates a more advanced stage of implementation, supported by clearer legal standards and institutional acceptance. This difference has direct implications for legal certainty, as the Malaysian framework provides a more predictable environment for digital transactions. In contrast, Indonesia still faces challenges in ensuring uniform interpretation and enforcement.

Another critical dimension of divergence lies in the level of government support and digital governance capacity. Malaysia's proactive approach, characterized by clearer regulatory guidance and institutional readiness, has facilitated a smoother transition toward digital legal services. This includes not only regulatory clarity but also efforts to enhance public awareness and digital literacy, which contribute to greater trust in online processes. In Indonesia, while efforts toward digitalization are ongoing, they are often fragmented and unevenly implemented across regions, reflecting broader infrastructure disparities and institutional coordination challenges. As a result, the adoption of digital notarial practices is less consistent and more dependent on local conditions.

Ultimately, these regulatory differences produce distinct legal and social consequences in each country. Malaysia's relatively coherent and adaptive framework supports greater efficiency, accessibility, and public trust in online notarial services, thereby reinforcing the legitimacy of digital legal processes. In contrast, Indonesia's more rigid yet evolving regulatory environment creates a transitional space marked by uncertainty, uneven adoption, and varying levels of user trust. This comparative insight underscores the importance of aligning legal frameworks with technological developments through responsive regulation and integrated digital governance. Without such alignment, the potential benefits of digital transformation in notarial practice may be undermined by persistent legal ambiguity and limited public confidence.

Digital Trust and Legal Certainty in Notarial Practice

Digital trust and legal certainty constitute two interdependent pillars in the transformation of notarial practice in the digital era. In conventional settings, trust in notarial services is institutionally

embedded through physical presence, formal procedures, and the notary's recognized authority as a public official.²⁸ However, as notarial functions increasingly shift to digital platforms, the basis of trust also shifts from physical verification to technological systems and regulatory guarantees. This transition raises fundamental questions about whether digital processes can provide an equivalent level of legal certainty, particularly in ensuring the authenticity, integrity, and enforceability of notarial acts.

The concept of digital trust refers to the confidence that users, both clients and legal practitioners, have in the reliability, security, and legitimacy of digital systems used in legal transactions.²⁹ In notarial practice, this includes trust in electronic signatures, digital identity verification mechanisms, and secure document management systems. Without sufficient digital trust, the adoption of online notarization will remain limited, regardless of its potential efficiency. This is especially evident in contexts where users perceive higher risks of fraud, data breaches, or identity manipulation, which can undermine the credibility of digital legal services.

Legal certainty, on the other hand, requires that legal rules governing digital notarial practices be clear, consistent, and enforceable. It encompasses the recognition of electronic documents as valid legal instruments, the admissibility of digital evidence in court, and the clarity of procedures for remote authentication. In jurisdictions where legal frameworks have not fully adapted to digital realities, uncertainties arise regarding the status of electronically executed notarial acts. These uncertainties can lead to disputes, diminish the evidentiary value of documents, and ultimately weaken notaries' role as guarantors of legal validity.

The interaction between digital trust and legal certainty becomes particularly critical when examining the challenges faced during and after the COVID-19 pandemic. The urgent need to maintain legal services under physical restrictions accelerated the adoption of digital tools, often outpacing the development of regulatory frameworks. In

²⁸ F A L Lois, "Mexican Notary Publics in the Fight against Money Laundering," *Mexican Law Review* 14, no. 1 (2021): 173–86, <https://doi.org/10.22201/IJ.24485306E.2021.1.16096>.

²⁹ L Al-Khalaileh, T Al-Billeh, and A Al-Hammouri, "The Legal Authority of the Electronic Authentication Certificate and Its Role in Proving E-Commerce Transactions," *International Journal of Electronic Security and Digital Forensics* 17, no. 1–2 (2025): 267–82, <https://doi.org/10.1504/IJESDF.2025.143469>.

such conditions, notaries and clients were compelled to rely on imperfect or provisional systems, which created a gap between practice and law. This gap highlights the risk of “functional adoption without legal consolidation,” where digital practices are widely used but not fully supported by robust legal provisions.

A comparative perspective between Indonesia and Malaysia illustrates how different levels of regulatory clarity influence digital trust. In Malaysia, clearer legal frameworks governing electronic signatures and digital transactions have contributed to greater public confidence in online notarial processes. This regulatory support reinforces digital trust by providing assurances that digital acts are legally recognized and protected. In contrast, Indonesia’s evolving regulatory environment has led to varying interpretations and levels of acceptance, which, in turn, affect user confidence and slow the widespread adoption of digital notarial services.

Another important dimension is the role of digital governance in mediating the relationship between trust and certainty. Effective digital governance involves not only the enactment of appropriate regulations but also the establishment of technological infrastructure, standardization of procedures, and continuous public education. It ensures that digital systems used in notarial practice are secure, interoperable, and accountable. In the absence of strong digital governance, even well-designed legal frameworks may fail to generate trust, as users remain uncertain about the practical reliability of digital platforms.

Moreover, inclusivity must be considered in developing digital trust and legal certainty. Unequal access to technology, varying levels of digital literacy, and generational differences in technology acceptance can create disparities in how legal services are experienced. If digital notarial systems are not designed to accommodate these differences, they risk exacerbating existing inequalities and limiting access to justice. Therefore, building trust and certainty requires not only legal and technological solutions but also socially responsive policies that address these disparities.

In finding, the sustainability of digital notarial practice depends on the successful integration of digital trust and legal certainty within a coherent legal and institutional framework. Technological innovation alone is insufficient without corresponding legal recognition and public confidence. Both Indonesia and Malaysia must continue to refine their regulatory approaches, strengthen digital governance, and promote

inclusive access to technology in order to ensure that digital transformation enhances rather than undermines the fundamental principles of notarial practice. Only through this integrated approach can digital notarization achieve its full potential as a secure, efficient, and legally reliable system.

Socio-Legal Barriers to Cyber Notary Implementation

Here, the social dynamics that have resulted in the acceptance and adoption of online notary practices in Indonesia and Malaysia are discussed, as well as the hurdles hindering both countries' implementation of these systems.

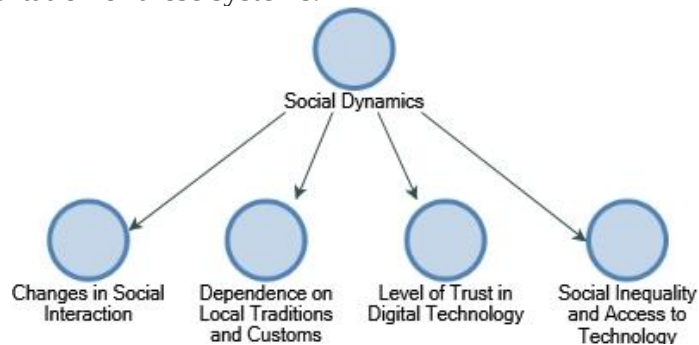


Figure 1. Social dynamics and challenges in supporting online notary practices in Indonesia. Source: Processed by Researchers to Maximize Nvivo 12 Plus.

Throughout the pandemic, Indonesian society has adapted to many online interactions, including online service.³⁰ However, despite the increasing adoption of digital technology post-pandemic, most Indonesians still prefer face-to-face interaction. Because of social values, direct Communication is considered a guarantee of building trust and legal certainty.³¹ Legal proceedings that affect multiple personal and financial interests tend to be seen as more legitimate if held in person and the flesh.³²

³⁰ Arif and Octarina, "Urgency Of Cyber Notary Application In The Pandemic Of COVID-19 For The Need Of Authentic Deed"; Muh Akbar, Fhad Syahril, and Nurhaedah Hasan, "Legal Analysis of the Application of Cyber Notary in the Notary Profession in Indonesia," *JULIA: Jurnal Legislasi Amsir* 11, no. 2021 (2024): 352–58.

³¹ Stefan Koos, "The Digitization of Notarial Tasks - A Comparative Overview and Outlook of 'Cyber Notary' In Indonesia and Germany," *The Indonesian Journal of Socio-Legal Studies* 2, no. 2 (2023): 1–28, <https://doi.org/10.54828/ijsls.2023v2n2.1>.

³² Principia Prima et al., "Legal Analysis of the Notary 's Role in Protecting Client Personal Data," *The Easta Journal Law and Human Rights* 3, no. 01 (2024): 49–62, <https://doi.org/10.58812/eslhr.v3i01>.

The situation is different in Indonesia, where people are more familiar with numerous local cultures and customs that affect their dealings with a notary. The prevailing perception, especially among more conservative communities, is that a legal transaction needs to be done formally and requires both the notary and the client to be physically present.³³ This makes people see them as rare, and they are still not consistent with local traditions that prefer direct, face-to-face meetings for every transaction.

The trust gap in digital technology is still a massive problem in Indonesia.³⁴ While technology adoption in Indonesia has skyrocketed throughout the pandemic, beyond service delivery, certain segments of society remain reluctant to transition away from offline systems when it comes to legal documentation and transactions. Data security and the signatory personality are often major concerns, so old-generation people or less technologically attuned individuals heavily rely on physical engagement with the notaries.

Unequal access to technology and information among regions in Indonesia also shapes social dynamics.³⁵ Thus, individuals living in an urban environment can more conveniently access online notary services because of the better digital facilities available (like speedy internet and proper technological devices). On the other hand, rural and remote areas have been highly affected by poor access to this technology, which has affected the low adaptation of the means of notary to rural areas. This leads to inequality in notary services accessible to different layers of society.

³³ Muhammad Maghfur Agung, Sukarmi Sukarmi, and RR. Imam Rachmad Sjaffie, "Certainty of Law for Notary Candidates in Regions That Establish the Large-Scale Social Restrictions in East Jakarta City," *Nurani: Jurnal Kajian Syari'ah Dan Masyarakat* 21, no. 1 (2021): 69–80, <https://doi.org/10.19109/nurani.v21i1.8392>; Nurwanti Setiawan and Nynda Fatmawati Octarina, "Legal Uncertainty Over Notary Protocols in Law Number 43 of 2009," *Journal of Law and Legal Reform* 3, no. 4 (2022): 543–66, <https://doi.org/10.15294/jllr.v3i4.58654>.

³⁴ Abdul Halil Hi Ibrahim, Tawakkal Baharuddin, and Marno Wance, "Bibliometric Analysis of E-Government and Trust: A Lesson for Indonesia," *Jurnal Borneo Administrator* 19, no. 3 (2023): 269–84, <https://doi.org/10.24258/jba.v19i3.1303>.

³⁵ Sujarwoto Sujarwoto and Gindo Tampubolon, "Spatial Inequality and the Internet Divide in Indonesia 2010–2012," *Telecommunications Policy* 40, no. 7 (2016): 602–16, <https://doi.org/10.1016/j.telpol.2015.08.008>.

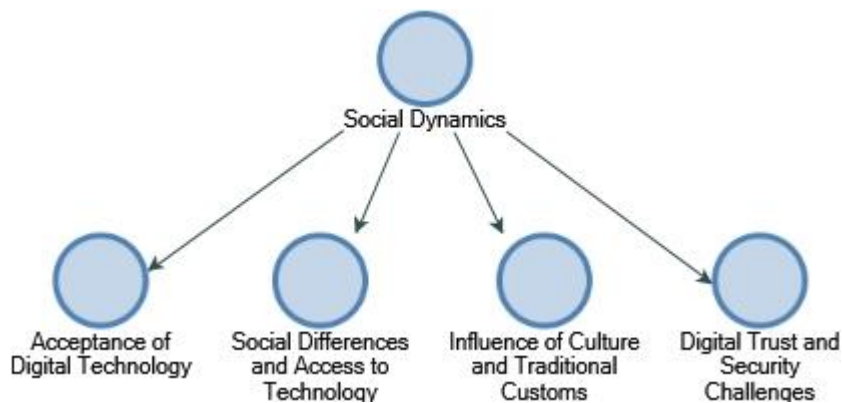


Figure 2. Social dynamics and challenges in supporting online notary practices in Malaysia. Source: Processed by Researchers to Maximize Nvivo 12 Plus.

The emergence of online notary practices in Malaysia is largely driven by the growing acceptance of technology amongst the young populace. Access to the internet has become available, and smartphones are widely used, enabling the younger generation in Malaysia to be more open to changes to come and more receptive to online systems in many domains, including legal domains like notarization.³⁶ The pandemic accelerated this trend, and younger users are not only using online services for personal needs but also gradually becoming accustomed to the validity and reliability of electronic signatures and document digitization processes.

Unequal access to technology among several social groups is one of the chief social problems in Malaysia that could hinder an online notary practice. Despite many municipalities in Malaysia having a good range of internet and digital devices, certain rural or less developed areas continue to face challenges accessing these.³⁷ However, limited internet infrastructure and low digital literacy among some people will continue to hinder access to online notary services. Even a simple overview of the concept of notarization shows us that this is a social problem we must address to implement this online notary system throughout all social strata.

³⁶ Ong Argo Victoria, "Comparative Study of Legal Requirements for Being a Notary and Duties & Authority of a Notary in Indonesia and Malaysia" (Sultan Agung Islamic University, 2023).

³⁷ Jia Jun Gabriel Yau and Siow Hooi Tan, "The Kuznets Curve, Information and Communication Technology, and Income Inequality in Malaysia," *International Journal of Economics and Management* 16, no. 2 (2022): 163–77, https://doi.org/10.47836/ijeam_16.2.02.

Furthermore, the acceptance of online notary practices is impacted by the culture and traditional habits of Malaysian society, notably among the older generation. Legal disputes are largely resolved using face-to-face processes, which many clients, particularly older clients, are used to and comfortable with, and traditional approaches have been around for a long time. While offering many more convenient options, online notarization is said to be less personalized or legally powerful than the traditional method. These social dynamics create inertia to change and affect technology adoption in the legal industry.

Social dynamics are also influenced by trust and security challenges when using digital technology for legal matters.³⁸ While numerous have used online transactions, too, worrying about how personal data may be kept confidential and safe is a concern among many Malaysians who use any digital system. However, some groups hesitate about the stability and standards of electronic signatures, especially regarding legal documents, which are highly critical and sensitive. The pending social problem of this case is to confirm for the general people if digital exchanges, like traditional face-to-face procedures, are legally equipped.

These challenges can be overcome by improving the population's digital literacy and the technological infrastructure of the less developed regions in each country. The governments in Indonesia and Malaysia must strengthen regulations to protect those involved in online deals, deter illegal transactions, and ensure that the technology used is safe and reliable. It is also important to build trust in online notary practices to educate the public on the validity of electronic signatures and the security of personal information. Furthermore, a more sensitive approach towards a locality's culture and customs in community matters would help raise acceptance levels for the system, especially among older generations who are usually more reluctant to part away from traditional practices in legal matters.

CONCLUSION

This study concludes that the transformation of notary practices in Indonesia and Malaysia post-pandemic is not only triggered by shifts in social dynamics, but is highly determined by regulatory readiness, digital literacy, and the characteristics of their respective national legal systems.

³⁸ Bakri Mat et al., "Cybersecurity and Digital Economy in Malaysia: Trusted Law for Customer and Enterprise Protection," *International Journal of Innovative Technology and Exploring Engineering* 8, no. 8 Special Issue 3 (2019): 214–20.

The findings show a dichotomy of development: Malaysia has made significant progress thanks to adaptive regulation and high levels of technology uptake, while Indonesia still faces structural barriers in the form of legal uncertainty, digital divides, and low public trust in technology infrastructure. Theoretically, this research strengthens the integration between the theory of legal certainty and the digital governance framework, which emphasizes that legal adaptation to technological disruption must maintain the fundamental principles of validity and legitimacy of authentic deeds.

Practically and normatively, this study confirms that the adoption of technology in notary practice has serious implications for identity verification mechanisms, electronic signature recognition, and the formal validity of deeds that require clarity of legal norms. The current regulatory inconsistency risks creating legal vulnerabilities for notaries and interested parties. Therefore, a comprehensive harmonization of cyber notary regulations is needed to ensure transactional security, data protection, and equal access to digital notary services in both countries. This rearrangement of the legal framework is crucial to transform traditional practices towards a system based on digital trust.

As a futuristic reflection, this study confirms that the future of notary practice lies in the orbit of the evolution of global digital law that demands legal integration at the regional level, particularly within the scope of ASEAN. The harmonization of legal standards related to digital authentication and cross-border electronic document recognition is an urgent strategic issue to be developed. Further research is suggested to explore broader comparative regulatory models as well as the design of inclusive and secure cyber notary systems. Thus, the implications of this research are expected to make a significant contribution to the formation of an integrated, adaptive, and sustainable digital legal ecosystem in the midst of globalization.

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