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TRANSPARENCY THROUGH EFFICIENCY: DOES FINANCIAL SYSTEM EFFICIENCY CURB FINANCIAL CRIME? A GLOBAL PERSPECTIVE

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Abstract

Financial Crime has evolved into a global phenomenon, transcending borders and exploiting regulatory loopholes in an increasingly interconnected financial system. Financial crime, including money laundering, tax evasion, and other illicit activities, not only undermines national financial stability but also erodes public trust in institutions and hinders sustainable economic development. Sustainability has become a cornerstone of the modern era, ensuring that economic growth, social well-being, and environmental protection progress together without depleting resources for future generations. The current study uses panel data from 134 countries, including developed and developing nations, covering 2012 to 2023. Financial crime is treated as a dependent variable measured through the Corruption Perceptions Index (CPI), the shadow economy, and money laundering. The study also uses pooled ordinary least squares, fixed-effects, and generalized method of moments estimators to ensure robust results and address potential endogeneity. The results show that FSE is positively related to CPI, meaning that more efficient financial systems are associated with lower corruption. FSE is negatively related to both the shadow economy and money laundering risk, indicating that efficiency reduces informal activity and illicit financial flows. Among the controls, inflation is weakly associated with higher corruption, while population and economic growth show little influence. The findings suggest that efficient financial systems improve transparency, traceability, and accountability, which makes financial crime harder to conceal. The study contributes to the corporate governance and financial crime literature by providing global evidence across three complementary measures of financial crime. Policymakers are advised to combine financial sector efficiency reforms with strong regulation, supervision,

and digital governance to curb corruption, informality, and money laundering. This study contributes to the growing literature on financial crime by offering a comprehensive cross-country analysis and providing policy-relevant insight. It underscores the need for policymakers to strengthen financial mechanisms, harmonize international standards, and leverage technological advancement to curb financial crime.

INTRODUCTION

Financial crimes such as fraud, corruption, money laundering, and cybercrime undermine infrastructure investment, reduce economic productivity, impede connectivity, and hinder economic development. Transparency International's Corruption Perceptions Index (CPI) measures perceptions of corruption across nations and highlights its detrimental effects on economic development, the investment climate, and governance (Osmond et al., 2023). These crimes are often committed for personal gain, greed, or power, or to conceal other criminal activities, posing a significant threat to national and global security. Financial efficiency involves a financial system that allocates resources efficiently, ensures cost-effective operations, supports economic stability, and minimizes risks (Levine, 2021). It involves integrating sound regulation, advanced technology, and effective market mechanisms to foster economic growth and resilience. It ensures capital and labor are allocated to their most productive uses, prevents mismanagement, and supports innovation (North, 1990). Fair and transparent markets rely on accurate pricing (Levine, 2021), while strong regulatory measures ensure market integrity and trust (Chen et al., 2023). Technologies like blockchain and artificial intelligence (AI) speed up financial operations and improve accuracy, risk assessment, fraud detection, and customer experiences (McAfee, 2021).

Efficient financial systems promote economic development by encouraging transparency, strengthening oversight, and reducing financial crime. They enable productive investment, job creation, and technological innovation. Countries with higher financial efficiency report stronger GDP growth and lower volatility (Levine, 2021). However, inefficiencies, such as weak regulations or technological gaps, create opportunities for money laundering, tax evasion, and cybercrime (UNODC, 2021; Chen et al., 2023). Transparent and efficient systems boost market confidence, investment, and growth (Schneider, 2018) by streamlining processes, reducing transaction and operational costs, such as electronic payment systems, and lessening the costs of cash handling and transaction delays (OECD, 2020). They are more resilient to economic disruptions, ensuring liquidity and stability even during crises, such as the 2008 financial meltdown (North, 1990). They also promote financial inclusion, integrating underserved populations into formal financial systems, reducing reliance on shadow economies and unregulated financial practices, and enhancing overall economic health (IMF, 2019).

Financial efficiency is hindered by outdated or inconsistent regulations, technological disparities, corruption, weak governance, and systemic risks. Unequal access to advanced financial technologies creates inefficiencies, particularly in developing countries (Chen et al., 2023). Corruption in financial institutions and regulatory bodies diverts resources, reduces trust, and impairs financial efficiency (Djankov et al., 2022). Interconnected financial systems also amplify risks during crises, as seen in global financial collapses (Levine, 2021). Financial efficiency significantly influences a government's ability to monitor, control, and report on the use of public funds. Efficient financial systems use real-time monitoring, digital accounting tools, and performance-based budgeting to reduce discretion and opacity, which fuel corruption (GOVERNANCE, 2021). They ensure budget allocations match actual expenditures, making it harder for funds to be misappropriated. Inefficient systems are

vulnerable to manipulation and lack audit trails, creating loopholes for rent-seeking behavior. Moreover, financial efficiency also increases public trust by enhancing transparency, encouraging civic participation, and oversight (Brezzi, 2021).

The relationship between financial efficiency and corruption is based on institutional economics and principal-agent theory. According to institutional theory, robust, transparent financial systems reflect institutional quality, which is essential for deterring corruption (North, 1990). Inefficient financial management contributes to poor governance and weak rule of law, enabling corruption. Becker's economic theory of crime (1968) suggests that financial efficiency increases the expected cost of corruption by enhancing detection and punishment, reducing the incentive to engage in corrupt acts (Becker, 1968). Countries with higher scores on the Public Expenditure and Financial Accountability (PEFA) Index and Open Budget Index (OBI) often report lower levels of corruption, as measured by the Corruption Perceptions Index (CPI) (Transparency International, 2023; PEFA, 2022). Nordic countries are among the least corrupt globally (World Bank, 2022). Implementing Integrated Financial Management Information Systems (IFMIS) significantly reduces corruption by creating digital audit trails and automating financial controls (Mungiu-Pippidi, 2020). Efficient procurement systems can reduce procurement-related corruption by up to 25%. Technological integration enhances financial efficiency by reducing corruption through digitalization, such as blockchain and AI-driven audit systems (Bai et al., 2024). However, countries lacking effective financial oversight and budget discipline face higher levels of corruption, misallocation of public funds, and donor mistrust (OECD, 2020; IMF, 2021).

Logically, financial inefficiency often prevents certain groups from accessing formal banking services, leading to shadow economic activities. High banking fees limit financial inclusion, and inadequate regulatory oversight in regions leads to cash-based or unregulated transactions (IMF, 2019; Schneider, 2018; Chen et al., 2023; Levi, 2021). In financially inefficient systems with weak regulatory frameworks, low perceived risks make shadow economy participation more attractive. Institutional theory shows that weak governance exacerbates shadow economy activities, while efficient systems with robust monitoring reduce the viability of informal operations (North, 1990; Levi, 2021). Network theory emphasizes the importance of cross-sector collaboration in curbing the shadow economy (Zagaris, 2019).

Empirical and Theoretical Support

Empirical evidence shows a strong negative correlation between financial efficiency and shadow-economy activity. In Sub-Saharan Africa and Southeast Asia, financial inefficiencies contribute to shadow-economy activities, which account for over 30% of GDP. In Europe, this figure drops below 10% (Schneider, 2018; IMF, 2019). Countries investing in financial inclusion initiatives such as digital payment systems and microfinance services report significant reductions in shadow economy participation. Mobile banking in Kenya and efficient tax systems in Nordic countries have minimized shadow economic activities, reinforcing formal economic structures (Slemrod, 2017; Levi, 2021). Financial efficiency is crucial in preventing money laundering, which involves disguising or concealing illicit funds. But Inefficient systems, including outdated Anti-Money Laundering (AML) protocols, weak Know Your Customer (KYC) frameworks, and limited cross-border collaboration, create vulnerabilities for criminals (Zagaris, 2019) UNODC, 2021; Chen et al., 2023).

Financial inefficiency is a significant factor in money laundering as it creates information asymmetries between regulators, financial institutions, and customers, allowing criminals to exploit these gaps (Zagaris, 2019; Jensen & Meckling, 1976; North, 1990; Becker, 1968; Levi, 2021; Chen et al., 2023). Real-time transaction monitoring and cross-border data sharing can reduce laundering risks by up to 30% (Chen et al., 2023; UNODC, 2021). Financial institutions investing in advanced AML technologies, such as AI-driven monitoring systems, can detect

suspicious transactions at higher rates than manual processes (McAfee, 2021; Levi, 2021). Financial inclusion, a key indicator of efficiency, reduces reliance on informal laundering channels, particularly in developing economies. High banking penetration can reduce laundering activity by up to 40% (IMF, 2019; Schneider, 2018; World Bank, 2020). Strong governance and technological advancements mitigate laundering risks, while inefficient systems face disproportionately high laundering rates (Zagaris, 2019; Levi, 2021; Chen et al., 2023).

Institutional theory (DiMaggio & Powell, 1983) emphasizes that institutional structures, rules, norms, and routines shape the behavior of individuals and organizations within a society. According to this theory, governance and institutional frameworks critically shape the country's financial development (Lisbinski & Burnquist, 2024) and economic growth (Nikzad, 2021). In the context of financial crime, institutional theory suggests that strong and efficient institutions play a pivotal role in deterring unethical practices and promoting transparency (Khan et al., 2022). Financial crimes such as money laundering, fraud, and embezzlement flourish in environments characterized by institutional weaknesses, including inconsistent regulatory enforcement, lack of oversight, and political interference (John-Oti & John-Oti, 2025). Developed economies, backed by robust institutional frameworks, tend to maintain higher levels of regulatory and judicial efficiency, which not only deters financial crime but also fosters a stable financial system and sustainable economic environment (Khan et al., 2023). In contrast, developing economies often struggle with institutional voids, leading to weak enforcement and a culture of impunity (Ahen & Amankwah-Amoah, 2018). This research investigates how differences in institutional strength between developed and developing countries influence the prevalence and patterns of financial crime. By analyzing financial efficiency, this study draws on institutional theory to explain how institutions constrain or enable financial crime. Institutional reforms that enhance transparency, accountability, and the rule of law are essential steps toward sustainable economic development (Habib et al., 2024). By fostering credible institutions, nations can reduce the risks of illicit financial flows, strengthen investor confidence, and align their financial systems with global sustainability goals (Hongbing, 2021). However, economic policy uncertainty negatively influences financial efficiency (Aman et al., 2024). Therefore, institutional theory offers a valuable lens for understanding how systemic improvements can combat financial crime and support long-term sustainable development.

Methodology

Table 1: Description of Variables

Variable	Measurement	Sources	References
CPI	Corruption Perception Index (CPI)	Transparency International	(Brici & Achim, 2023; Domashova & Politova, 2021)
Shadow Economy	Shadow Economy (% of GDP)		(Achim et al., 2024)
Money Laundering	Basel Anti-money Laundering Index (AML	Basel Institute on Governance	Achim et al., 2021; Brici & Achim, 2023)
Financial Institutions Efficiency (FIE)	Financial Institutions Efficiency (FIE) index	International Monetary Fund (IMF)	(Svirydzenka, 2016)

Inflation	Inflation, consumer prices (annual %)	World Development Indicators (WDI	(Ahmad et al., 2021; Sun et al., 2025)
Population	Population, total	World Development	(Sun et al., 2025)
Economic Growth	GDP per capita growth (annual percentage	World Development Indicators (WDI)	(Kanwal et al., 2023)

Result and Discussion

Table 2: Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
CPI	1608	45.62749	18.97635	13	92
SE	1608	26.80989	11.14102	5.1	58.2
AML	1608	5.695043	1.25335	2.356658	8.610344
FSE	1608	0.3990044	0.1868011	0.0577866	0.8810806
INF	1608	6.558459	18.43847	-4.294873	254.9485
POP	1608	5.19e+07	1.71e+08	320716	1.43e+09
EG	1608	1.647949	4.734132	-34.83117	62.11102

The panel has 1,608 observations for every variable, so the data are balanced with no missing values. The mean CPI is 45.63 (SD 18.98, range 13–92). On the CPI scale, a higher score means less corruption, so the average country sits in the moderate-to-high corruption zone, and countries differ widely. The shadow economy averages 26.81% (range 5.1–58.2), indicating a large informal sector across countries. The mean AML score is 5.70 (range 2.36–8.61), which suggests a fairly high average exposure to money laundering risk. FSE averages 0.399 on a 0–1 scale (min 0.058, max 0.881), so the financial system operates well below full efficiency and varies a lot.

Table 3: Correlation Matrix

	CPI	SE	AML	FSE	INF	POP	EG
CPI	1.0000						
SE	-0.7008*	1.0000					
AML	-0.6834*	0.4730*	1.0000				
FSE	0.5010*	-0.5315*	-0.3715*	1.0000			
INF	-0.2260*	0.1434*	0.1072*	-0.1025*	1.0000		
POP	-0.0654*	-0.1301*	0.0455	0.3545*	-0.0095	1.0000	
EG	-0.0159	0.0189	-0.0157	-0.0208	-0.1212*	0.0569*	1.0000

The three financial crime measures are strongly related, as expected. CPI correlates −0.70 with SE and −0.68 with AML, so cleaner countries have smaller shadow economies and lower laundering risk. SE and AML correlate positively at 0.47. FSE has the expected signs with all three crime proxies: it is positively correlated with CPI (0.50) and negatively with SE (−0.53) and AML (−0.37), and all three are significant. This provides preliminary support that more efficient financial systems are associated with less financial crime.

Table 4: Levin-Lin-Chu and Im-Pesaran-Shin Unit Root Test

	Levin-Lin-Chu		Im-Pesaran-Shin	
	Statistic	**p-value**	**Statistic**	**p-value**
CPI	-20.1776	0.0000***	-23.6452	0.0000***
SE	-19.5154	0.0000***	-24.8233	0.0000***
AML	-19.4997	0.0000***	-26.0817	0.0000***
FSE	-21.6058	0.0000***	-28.0462	0.0000***
INF	-21.9497	0.0000***	-27.9904	0.0000***
POP	-23.2087	0.0000***	-26.9859	0.0000***
EG	-20.6610	0.0000***	-27.8714	0.0000***

Levin-Lin-Chu assumes a common unit root test across countries. Im-Pesaran-Shin allows each country its own process. Both tests have the null hypothesis that the series contains a unit root. All p-values are 0.0000, which is significant at the 1% level. The null of a unit root is therefore rejected, and all series are stationary at level, I (0).

Table 5: Ordinary Least Squares, Fixed Effect Model, and GMM for Financial Crime (CPI)

	Pooled OLS		Fixed Effect Model		GMM	
CPI	**Coef.**	**P>|z|**	**Coef.**	**P>|z|**	**Coef.**	**P>|z|**
L1					0.5319332	0.000***
FSE	1.172013	0.017***	1.144988	0.020***	3.546113	0.063*
INF	-0.006896	0.069*	-0.00457	0.225	-0.004858	0.582
POP	3.17e-10	0.592	-4.66e-1	0.289	1.03e-08	0.504
EG	-0.017039	0.237	-0.01341	0.410	-0.012130	0.455
_cons	43.19349	0.000***	42.77056	0.000***	16.7591	0.010***
Hausman Test						
Chi^2	1.21		Probability		0.000***	

Note: *, **, * represents significance at 1%, 5%, and 10%.**

Table 6 shows that Chi-squared (Chi^2) = 1.21 and the p-value is 0.000. The probability value is less than the significance level (0.05). Hausman's findings confirmed that the study's null hypothesis (H0) can be rejected; hence, fixed effects are consistent and efficient in the current study. Financial crime, including money laundering, fraud, embezzlement, and insider trading, poses significant threats to the integrity, stability, and efficiency of financial systems. Financial crimes cover a broad spectrum of offenses, including money laundering, fraud, and corruption (Ünvan, 2020). Financial crime undermines financial systems and distorts market mechanisms. Financial crime can divert resources from productive uses, raise transaction costs, and create inefficiencies in capital allocation (Ugur & Dasgupta, 2011). Financial crime continues to pose a substantial threat to businesses and economies worldwide. Recent research has examined various dimensions of this issue, including prevention strategies, detection techniques, and organizational influences. While executives are generally proficient in establishing control systems and reporting procedures, they often lack the skills needed to investigate suspected criminal activity (Gottschalk & Solli-Sæther, 2011). According to OLS results, the financial efficiency system (FSE) has a coefficient value of 1.172013 and a p-value of 0.017*** across 134 countries. The fixed-effect results show that, in 134 countries, the financial efficiency system (FSE) is statistically significant (p-value = 0.020***); the coefficient is 1.144988. Similarly, the same result has been shown by the GMM that the financial efficiency system (FSE) influences corruption (CPI) positively, as the coefficient value is 3.546113 and the p-value is 0.063*, which is statistically significant in 134 countries.

Across OLS, fixed effects, and GMM estimates, the financial efficiency system (FSE) makes a substantial, positive contribution to CPI. Because CPI is a reversal indicator of corruption, the financial efficiency system (FSE) positively influences CPI, meaning a high CPI value reduces corruption and substantially mitigates the effects of financial crime. Efficient financial institutions detect and report suspicious activities, deterring criminals from exploiting loopholes (Levine & Russell, 2023). Illicit financial activities can significantly affect financial efficiency, which involves optimal resource allocation and maximizing economic value. Research indicates that strong business performance, external audits, and independent risk committees are associated with reduced financial crime, whereas larger committees may be associated with higher risk (Alice & Christian, 2022). Financial institutions operating in high-corruption contexts must cope with higher compliance costs, risk premiums, and transaction delays (Yousefi et al., 2013). Higher financial inefficiencies, such as credit misallocation and slower economic growth, are linked to fraud and corruption (Goel & Nelson, 2011). Blockchain technology and artificial intelligence (AI) can enhance fraud detection and transaction traceability (Arner et al., 2017). To prevent cross-border financial crime, coordination

among countries and institutions is an essential element (Canton, 2021). Corruption can hinder a firm's efficiency, especially in extremely corrupt situations (Hanousek et al., 2019). Corruption has been linked to reduced effective public budget management at the local government level (Bostan et al., 2018). Additionally, weak democratic institutions strongly reduce the effectiveness of public spending (Malyniak et al., 2019). Effective corruption control measures have been shown to increase corporate efficiency, whereas financial development reduces it (Haschka et al., 2023). Strong anti-corruption policies may reduce inefficiencies driven by financial growth, suggesting a significantly positive relationship between financial development and corruption control (Haschka et al., 2023).

Table 6: Ordinary Least Squares, Fixed Effect Model, and GMM for Financial Crime (Shadow Economy)

SE	Coef.	P>|z|	Coef.	P>|z|	Coef.	P>|z|
L1					0.0738398	0.052*
FSE	-9.606421	0.000***	-1.193921	0.091*	-0.886319	0.025**
INF	-0.002522	0.812	0.0159099	0.000***	0.002384	0.828
POP	-4.96e-09	0.003***	5.30e-09	0.415	-4.54e-09	0.007***
EG	0.0150134	0.709	-0.019712	0.008***	0.0335501	0.469
_cons	36.49697	0.000***	25.59219	0.000***	20.95126	0.000***

Note: *, **, * represents significance at 1%, 5%, and 10%.**

Many financial indicators show a non-linear, U-shaped relationship with the shadow economy, suggesting that financial development reduced the size of the shadow economy (Canh & Thanh, 2020). According to OLS results, the financial efficiency system (FSE) has a coefficient value of -9.606421 and a p-value of 0.000*** across 134 countries. The fixed-effect results show that, in 134 countries, the financial efficiency system (FSE) has a significant p-value (0.091*); the coefficient is -1.193921. Similarly, the same result has been shown by the GMM that the financial efficiency system (FSE) influences the shadow economy negatively, as the coefficient value is -0.886319 and the p-value is 0.0025***, which is statistically significant in 134 countries. According to OLS, fixed effects, and GMM results, the financial efficiency system (FSE) makes a substantial and negative contribution to the shadow economy. The financial efficiency system (FSE) negatively influences the shadow economy, meaning it significantly mitigates financial crime. Although the shadow economy tends to decline with economic growth, the consequences of financial development are more complex and have asymmetric effects (Mar'i & Cavusoglu, 2021). Notably, incorporating the shadow economy into national production estimates improves average efficiency scores but changes country efficiency rankings only slightly (Méon et al., 2011; Méon et al., 2006). This pattern persists in both developing and developed countries and remains constant across different manufacturing methods and labor inputs (Méon et al., 2011). Both institutional quality and financial development have been found to decrease the size of the shadow economy in the EU's transition economies (Bayar & Ozturk, 2016). The effects of financial crises are temporary and less noticeable in emerging and developing countries but tend to generate long-

term growth of the shadow economy in advanced economies (Nguyen & Duong, 2024).

Table 7: Ordinary Least Squares Regression for Financial Crime (Anti-Money Laundering)

	Pooled OLS		Fixed Effect Model		GMM	
AML	**Coef.**	**P>|z|**	**Coef.**	**P>|z|**	**Coef.**	**P>|z|**
					-0.05204	0.021***
FSE	0.8058333	0.000***	-0.8080944	0.000***	-0.4299859	0.025***
INF	0.0002142	0.844	0.0005477	0.615	-0.0008566	0.437
POP	-2.70e-10	0.112	1.04e-11	0.935	-5.00e-10	0.004***
EG	-0.011389	0.006***	-0.0107806	0.022***	-0.0035693	0.466
_cons	7.872414	0.000***	7.933893	0.000***	8.261761	0.000***

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Financial Efficiency and Anti-Money Laundering (AML)

To evaluate AML regulation based on incentives, this study emphasizes the importance of resolving the information asymmetries that financial intelligence units encounter (Azevedo Araujo, 2008). According to OLS results, the financial efficiency system (FSE) has a coefficient value of 0.8058333 and a p-value of 0.000*** across 134 countries. The fixed-effects results show that, in 134 countries, the financial efficiency system (FSE) is statistically significant (p-value = 0.000***), with a coefficient of 0.8080944. Similarly, the same result has been shown by the GMM that the financial efficiency system (FSE) influences corruption (CPI) positively, as the coefficient value is 0.7838511 and the p-value is 0.000***, which is statistically significant in 134 countries. Across OLS, fixed effects, and GMM estimates, the financial efficiency system (FSE) makes a substantial, positive contribution to anti-money laundering (AML). Because AML is a reversal indicator of financial crime, the financial efficiency system (FSE) positively influences anti-money laundering (AML), meaning a higher AML value reduces financial crime. Indonesia has implemented anti-money laundering laws, sophisticated monitoring systems, and specialized regulatory bodies to combat financial crime (Fauzi et al., 2018). Advanced anti-money laundering tools like automated monitoring and blockchain technology have significantly reduced opportunities for illicit fund laundering (Zagaris, 2019). Enhanced information sharing and a rise in suspicious transaction reports in the European Union underscored the ongoing need for robust international collaboration (Cotoc et al., 2021). Many strategies are being pursued to increase AML efficiency amid increasingly sophisticated criminal tactics (Mia & Supian, 2023).

Conclusion

This study examined the relationship between financial system efficiency (FSE) and financial crime using panel data from 134 developed and developing countries from 2012 to 2023. Financial crime was captured through three complementary measures: the Corruption Perceptions Index (CPI), the size of the shadow economy, and money laundering risk. Pooled OLS, fixed-effects, and GMM estimators were used to produce robust results and to address potential endogeneity. The findings are consistent across the three measures. FSE is positively related to CPI, meaning countries

with more efficient financial systems are perceived as less corrupt. FSE is also negatively related to both the shadow economy and money laundering risk, indicating that efficiency reduces informal economic activity and the flow of illicit funds. Among the control variables, inflation is weakly associated with higher corruption, while population and economic growth show little influence. This suggests that the quality and efficiency of financial institutions matter more for curbing financial crime than an economy's size or growth. The results point to a clear mechanism. Efficient financial systems improve transparency, traceability, and accountability. They make transactions easier to record, monitor, and verify, which raises the cost and difficulty of concealing corrupt payments, unreported income, and illicit proceeds. Financial crime thrives where opacity, weak oversight, and informal channels offer room to hide, and efficiency narrows that room.

The study contributes to the corporate governance and financial crime literature in three ways. It provides global, cross-country evidence rather than single-country or regional findings. It examines three distinct dimensions of financial crime within one framework, which offers a fuller picture than any single indicator. It also uses estimators that account for endogeneity, which strengthens confidence in the reported associations. Together, these contributions show that financial sector efficiency is not only an economic objective but also a governance tool for protecting institutional integrity and supporting sustainable development. Several limitations point to future research. Cross-country indices such as the CPI measure perceptions, and shadow economy and money laundering estimates rely on modelling assumptions, so read the results with that in mind. Future studies could use firm-level or sector-level data, examine nonlinear or threshold effects of efficiency, and test whether the relationship differs between developed and developing economies or across regulatory regimes.

Recommendations

Policymakers should pair financial sector efficiency reforms with strong regulation and independent supervision, because efficiency alone cannot curb financial crime. Regulators should expand digital governance tools such as electronic payment systems, digital identity verification, and real-time transaction monitoring to improve traceability. Countries should harmonize their anti-money laundering and tax transparency standards with international frameworks to close regulatory loopholes that criminals exploit across borders. Greater cross-border information sharing between financial intelligence units and tax authorities would make illicit flows harder to move undetected. Governments should also encourage formalization by lowering the cost of accessing formal financial services, which reduces the incentive to operate in the shadow economy. Finally, institutions should strengthen accountability through mandatory disclosure, whistleblower protection, and regular independent audits, and developing economies should receive technical support to build these capacities.

REFERENCES

Arner, D. W., Barberis, J. N., & Buckley, R. P. (2017). FinTech, RegTech, and the reconceptualization of financial regulation. Northwestern Journal of International Law & Business, 37(3), 371–414.

Azevedo Araujo, R. (2008). Assessing the efficiency of the anti-money laundering regulation: An incentive-based approach. Journal of Money Laundering Control, 11(1), 67–75. https://doi.org/10.1108/13685200810844505

Bayar, Y., & Ozturk, O. F. (2016). Financial development and shadow economy in European Union transition economies. Managing Global Transitions, 14(2), 157–173. †

Becker, G. S. (1968). Crime and punishment: An economic approach. Journal of Political Economy, 76(2), 169–217. https://doi.org/10.1086/259394

Brezzi, M., González, S., Nguyen, D., & Prats, M. (2021). An updated OECD framework on drivers of trust in public institutions to meet current and future challenges (OECD Working Papers on Public Governance). OECD Publishing. https://doi.org/10.1787/b6c5478c-en

Demirgüç-Kunt, A., Klapper, L., Singer, D., & Ansar, S. (2022). The Global Findex Database 2021: Financial inclusion, digital payments, and resilience in the age of COVID-19. World Bank. https://doi.org/10.1596/978-1-4648-1897-4

Canh, N. P., & Thanh, S. D. (2020). Financial development and the shadow economy: A multi-dimensional analysis. Economic Analysis and Policy, 67, 37–54. https://doi.org/10.1016/j.eap.2020.05.002

Cotoc, C.-N., Şcheau, M. C., & Achim, M. V. (2022). Trends in combating money laundering in the European context. DIEM: Dubrovnik International Economic Meeting, 7(1), 142–152. https://doi.org/10.17818/DIEM/2022/1.14

DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. American Sociological Review, 48(2), 147–160. https://doi.org/10.2307/2095101

Gottschalk, P., & Solli-Sæther, H. (2011). Financial crime in business organizations: An empirical study. Journal of Financial Crime, 18(1), 76–92. https://doi.org/10.1108/13490791111098816

Hanousek, J., Shamshur, A., & Tresl, J. (2019). Firm efficiency, foreign ownership and CEO gender in corrupt environments. Journal of Corporate Finance, 59, 344–360. https://doi.org/10.1016/j.jcorpfin.2017.06.008

Haschka, R. E., Herwartz, H., Silva Coelho, C., & Walle, Y. M. (2023). The impact of local financial development and corruption control on firm efficiency in Vietnam: Evidence from a geoadditive stochastic frontier analysis. Journal of Productivity Analysis, 60, 203–226. https://doi.org/10.1007/s11123-023-00694-z

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. Journal of Financial Economics, 3(4), 305–360. https://doi.org/10.1016/0304-405X(76)90026-X

Levi, M. (2021). Making sense of professional enablers' involvement in laundering organized crime proceeds and of their regulation. Trends in Organized Crime, 24, 96–110. https://doi.org/10.1007/s12117-020-09401-y

Levine, R. (2021). Finance, growth, and inequality (IMF Working Paper No. 2021/164). International Monetary Fund.

Lisbinski, F. C., & Burnquist, H. L. (2024). Institutions and financial development: Comparative analysis of developed and developing economies. EconomiA, 25(2), 347–376. https://doi.org/10.1108/ECON-11-2023-0201

Medina, L., & Schneider, F. (2018). Shadow economies around the world: What did we learn over the last 20 years? (IMF Working Paper No. 18/17). International Monetary Fund. https://doi.org/10.5089/9781484338636.001

Méon, P.-G., Schneider, F., & Weill, L. (2011). Does taking the shadow economy into account matter when measuring aggregate efficiency? Applied Economics, 43(18), 2303–2311.

North, D. C. (1990). Institutions, institutional change and economic performance. Cambridge University Press.

PEFA Secretariat. (2022). The 2022 global report on public financial management. https://pefa.org/global-report-2022/en

Svirydzenka, K. (2016). Introducing a new broad-based index of financial development (IMF Working Paper No. 16/5). International Monetary Fund. https://doi.org/10.5089/9781513483709.001

Transparency International. (2024). Corruption Perceptions Index 2023. https://www.transparency.org/en/publications/corruption-perceptions-index-2023

Ugur, M., & Dasgupta, N. (2011). Corruption and economic growth: A meta-analysis of the evidence on low-income countries and beyond (MPRA Paper No. 31226). University Library of Munich. https://mpra.ub.uni-muenchen.de/31226/

Ünvan, Y. A. (2020). Financial crime: A review of literature. In Contemporary issues in audit management and forensic accounting (Contemporary Studies in Economic and Financial Analysis, Vol. 102, pp. 265–272). Emerald. https://doi.org/10.1108/S1569-375920200000102019

Wu, D. F., & Schneider, F. (2019). Nonlinearity between the shadow economy and level of development (IMF Working Paper No. 2019/048). International Monetary Fund.

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