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Money Laundering-The Economic Impact and Its Implications: Channels, Institutional Responses, Ethical Dimensions, and a Critical Assessment of Selected Estimates

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Research Article

Keywords: money laundering; USA; Bangladesh; trade-based money laundering; illicit financial flows; hundi; foreign-exchange reserves; financial integrity; anti-money laundering.

Posted Date: November 5th, 2026

DOI: https://doi.org/10.21203/rs.3.rs-11616405/v1

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Additional Declarations: The authors declare no competing interests.

Abstract

Money laundering undermines the integrity of financial systems by concealing the criminal origin, ownership, or control of assets and enabling the proceeds of crime to enter the legitimate economy. In developing economies, the problem can interact with weak governance, corruption, trade-related vulnerabilities, informal value-transfer systems, capital flight, and constraints on domestic resource mobilisation. This article examines money laundering with a particular focus on USA and Bangladesh. It develops a structured account of the principal channels identified in the source manuscript—trade misinvoicing, informal remittance and hundi networks, misuse of financial incentives, cash and financial-sector transactions, and emerging virtual-asset risks—and evaluates their possible macroeconomic and institutional consequences. The article adopts a qualitative, desk-based research design using documentary analysis of legislation, financial-intelligence publications, international standards, central-bank statistics, and peer-reviewed research. It also audits numerical illustrations in the original manuscript. The audit finds that several calculations cannot support the causal conclusions attributed to them: illicit funds cannot simply be added to official foreign-exchange reserves; an exchange rate cannot be derived by dividing reserves into a hypothetical combined amount; trade-value discrepancies are risk indicators rather than proof of laundering; and the original US interest calculation assumes an unsupported constant rate and simple-interest convention. Official Bangladesh Bank data show that reserve figures vary according to gross and IMF BPM6 definitions, making consistent measurement essential. Bangladesh Financial Intelligence Unit reporting demonstrates active suspicious-transaction intelligence activity, including 17,345 STR/SAR reports received in FY2023–24, but report counts should not be interpreted as proven criminal cases or total laundering volumes. The article concludes that effective prevention requires risk-based supervision, trade-data analytics, beneficial-ownership transparency, stronger inter-agency cooperation, proportionate enforcement, and improved asset recovery. It argues that economic estimates should be presented transparently, with explicit assumptions and uncertainty, rather than as definitive measures where direct observation is unavailable.

1. Introduction

Money laundering is a process through which the proceeds of crime are converted, transferred, concealed, or otherwise handled so that their illicit origin is obscured and they can be used within the formal or informal economy. It is not merely a financial-recording problem. It is an enabling activity that allows proceeds from corruption, fraud, tax crimes, trafficking, smuggling, and other predicate offences to be retained and enjoyed while reducing the risk of detection. The Financial Action Task Force (FATF) describes an international framework for preventing money laundering and terrorist financing through legal, supervisory, preventive, and law-enforcement measures (FATF, 2026).

The scale of laundering is difficult to measure because the activity is deliberately hidden and does not appear directly in ordinary national accounts. FATF notes that widely cited estimates—such as the historical range of 2–5% of global GDP—are rough indicators rather than current, directly observed totals. It also reports a UNODC estimate that 2.7% of global GDP, approximately USD 1.6 trillion, was laundered

in 2009. Such figures should therefore be accompanied by their reference year and methodological limitations, not presented as a contemporary annual measurement (FATF, n.d.).

Lowest/Development Countries exposure is shaped by its integration into global trade, large-scale labour migration, remittance flows, a substantial cash economy, complex ownership structures, and the role of ports and customs administration. These features are not inherently criminal. They become vulnerabilities when weak documentation, false declarations, collusion, opaque ownership, or ineffective oversight allow legitimate commercial channels to be misused. Recent peer-reviewed research on Lowest/Development Countries identifies over-invoicing, under-invoicing, misdeclaration, false documentation, and exploitation of export incentives as relevant trade-based money-laundering risks (Milon, Zafarullah, & Poli, 2024; Milon & Zafarullah, 2023).

This article develops the original manuscript's central concern—that laundering can damage economic development—while separating established evidence from hypotheses and illustrative calculations. It does not claim to estimate the total amount laundered from Lowest/Development Countries. Instead, it examines the mechanisms through which laundering may affect foreign-exchange availability, tax collection, market competition, public trust, and the capacity of the state to finance development.

2. Research Problem, Aim, Objectives, and Questions

2.1 Research problem

Public discussion of money laundering in Lowest/Development Countries frequently combines several related but distinct phenomena: criminal proceeds, undeclared domestic wealth, trade misinvoicing, capital flight, tax evasion, and informal remittance settlement. These categories can overlap, but they are not interchangeable. A further problem arises when large numerical estimates are repeated without a transparent method, consistent units, or an explanation of uncertainty. This can weaken policy debate and lead to incorrect conclusions about reserves, exchange rates, inflation, and fiscal capacity.

2.2 Aim

The aim of this article is to analyse the channels, economic implications, and ethical dimensions of money laundering in Lowest/Development Countries and to assess the reliability of selected quantitative illustrations contained in the author's original manuscript.

2.3 Objectives

- To define money laundering and distinguish it from black money, illicit financial flows, tax evasion, and capital flight.

- To identify principal laundering vulnerabilities relevant to Lowest/Development Countries, particularly trade misinvoicing and informal value-transfer systems.
- To explain the potential effects of laundering on foreign-exchange markets, public revenue, investment quality, competition, and economic development.
- To examine the institutional and legal responsibilities of financial institutions, regulators, customs authorities, and law-enforcement agencies.
- To assess the ethical dimensions of laundering through consequentialist, virtue-ethical, and deontological perspectives.
- To review the numerical examples in the source manuscript and identify which calculations are reproducible, illustrative, or methodologically unsupported.

2.4 Research questions

1. What forms of money laundering and related illicit financial flows are most relevant to Lowest/Development Countries?
2. Through what mechanisms can laundering weaken economic governance and development?
3. What do available official and peer-reviewed sources establish about Lowest/Development Countries AML/CFT framework and risk areas?
4. Are the selected calculations in the original manuscript dimensionally and economically valid?
5. What institutional and policy measures could improve prevention, detection, investigation, and recovery?

3. Conceptual Definitions and Distinctions

3.1 Money laundering

The 1988 United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances (Vienna Convention), Article 3(1), addresses the conversion or transfer of property known to be derived from specified criminal activity when undertaken to conceal or disguise its illicit origin or to assist a person involved in the offence to evade legal consequences. Contemporary AML frameworks extend beyond drug-related offences and cover proceeds from a broad range of predicate crimes. The core elements are criminal origin, knowledge or legally relevant suspicion, and conduct intended to conceal, disguise, transfer, or use the proceeds.

3.2 Black money and undeclared assets

The term 'black money' is used inconsistently in public debate. It may refer to income generated through illegal activity, legally earned income concealed from tax authorities, wealth held outside required

declarations, or assets acquired through corruption. Not every undeclared asset is necessarily the proceeds of a predicate crime, and not every instance of tax evasion automatically proves a money-laundering offence. Legal classification depends on the relevant statute, the underlying conduct, and evidence.

3.3 Illicit financial flows

Illicit financial flows (IFFs) are a broader policy category generally referring to cross-border movements of money or value that are illegal in source, transfer, or use. They may include corruption proceeds, tax and customs evasion, criminal proceeds, and trade misinvoicing. Money laundering is one way in which illicit value may be moved or concealed, but IFFs and money laundering are not synonyms. The distinction matters because different measurement methods capture different activities.

3.4 Capital flight

Capital flight describes the movement of domestic capital abroad, often in response to economic, political, or institutional uncertainty. Some capital flight is lawful and recorded; some is concealed or illegal. Capital flight may involve laundering where criminal proceeds are transferred and disguised, but outward investment or foreign asset acquisition alone does not establish money laundering.

3.5 Trade misinvoicing and trade-based money laundering

Trade misinvoicing involves deliberate falsification of invoice values, quantities, product descriptions, or other trade information to transfer value, evade duties or taxes, or conceal proceeds. Trade-based money laundering (TBML) is the use of trade transactions to disguise the proceeds of crime. Trade discrepancies may indicate risk, but mirror-trade gaps can also arise from timing, freight and insurance valuation, partner attribution, classification differences, and reporting errors. Global Financial Integrity therefore treats trade-value gaps as indicators requiring investigation, not as conclusive measurements of criminal proceeds (Global Financial Integrity [GFI], 2021, 2026).

4. Literature Review and Theoretical Framework

4.1 International measurement and the limits of aggregate estimates

Because laundering is concealed, no comprehensive administrative dataset records its full value. The often-cited 2–5% global-GDP estimate originated as a broad historical benchmark and should not be treated as a current annual estimate. FATF explicitly cautions that reliable definitive totals are not available and that the organisation does not publish a single global laundering figure (FATF, n.d.). The

methodological implication is that research should report the source, year, definition, estimation technique, and uncertainty attached to each figure.

4.2 Trade-based laundering in Bangladesh

Milon and Zafarullah's study of a Bangladeshi seaport uses qualitative evidence from customs officials, port personnel, importers, and customs brokers. It identifies under-invoicing, over-invoicing, and misdeclaration as prominent techniques in the cases examined (Milon & Zafarullah, 2023). A subsequent study of Bangladesh's export sector identifies risks involving ready-made garments, agricultural products, processed foods, false documentation, misuse of export incentives, and a reported 'sample shipment' method (Milon et al., 2024). These studies provide sector-specific evidence but do not establish the total value of laundering across the national economy.

GFI's cross-country research uses partner-country trade data to identify discrepancies in reported trade values. Its 2021 report examines 134 developing countries over 2009–2018 and explains how over- and under-invoicing can move wealth across borders. GFI's 2026 regional report similarly stresses that value gaps are risk indicators and that valuation, timing, and partner-reporting differences can create discrepancies without illicit intent (GFI, 2021, 2026).

4.3 Institutional framework in Bangladesh

Bangladesh's Money Laundering Prevention Act, 2012 establishes offences and institutional powers relating to money laundering and connected conduct. The Bangladesh Financial Intelligence Unit (BFIU), housed within Bangladesh Bank, receives and analyses suspicious transaction reports (STRs), suspicious activity reports (SARs), cash transaction reports, and other intelligence. Its FY2023–24 annual report states that it received 17,345 STR/SAR reports, comprising 11,736 STRs and 5,609 SARs. This is evidence of reporting activity, not a count of proven offences or a direct estimate of total laundering (BFIU, 2024).

The FATF/APG mutual evaluation of Bangladesh adopted in 2016 found that technical compliance was generally stronger than effectiveness across several immediate outcomes, and subsequent follow-up reports documented progress in selected recommendations while Bangladesh remained under enhanced follow-up at the time of those reports (FATF, 2016, 2019, 2020). These assessments are dated and should not be represented as a current evaluation without checking for later assessments.

4.4 Theoretical framework

This article uses three complementary perspectives. First, a consequentialist perspective associated with John Stuart Mill evaluates conduct by its effects on overall welfare. If laundering enables corruption, reduces tax revenue, distorts competition, or undermines public services, its consequences can reduce

social welfare. Second, Aristotle's virtue ethics focuses on character, purpose, and the cultivation of virtues such as justice, honesty, and practical wisdom. A financial system that rewards concealment and corrupt enrichment undermines institutional virtue. Third, Kantian deontology evaluates whether conduct respects duties and can be universalised. Deception about the source or ownership of funds is difficult to reconcile with duties of honesty and respect for lawful institutions. Together, these approaches explain why laundering is not merely a technical violation but also an ethical failure.

5. Methodology

5.1 Research design

The study uses a qualitative, documentary research design with a structured numerical audit. It is a desk-based analytical article rather than a new econometric study or a field survey. The analysis draws on (i) the author's submitted manuscript; (ii) USA and Bangladesh statutes and financial-intelligence publications; (iii) FATF and APG materials; (iv) Federal Reserve Bank /Bangladesh Bank reserve and external-sector statistics; (v) peer-reviewed studies of USA and Bangladesh's trade sector; and (vi) research reports on trade-related illicit financial flows.

5.2 Data sources and selection

Sources were selected for institutional authority, relevance to USA and Bangladesh, traceability, and methodological transparency. Official figures are preferred for reserves and financial-intelligence reporting. Peer-reviewed studies are used to describe specific laundering vulnerabilities. International research reports are used to explain measurement approaches. The author's numerical estimates are retained as claims to be audited, not treated as independently verified observations.

5.3 Analytical procedure

1. Classify each claim by subject: legal definition, laundering channel, institutional activity, macroeconomic effect, or numerical estimate.
2. Check whether the source identifies a reference year, currency, unit, population, and measurement method.
3. Recalculate arithmetic where the necessary inputs are available.
4. Check dimensional consistency: for example, USD cannot be added to BDT, and reserves cannot be combined with a hypothetical annual flow without a stock-flow framework.
5. Separate correlation, plausible transmission mechanisms, and demonstrated causation.
6. Report unresolved data gaps and avoid converting unverified claims into findings.

5.4 Limitations

The study does not have access to confidential bank records, customs declarations, tax files, court judgments, beneficial-ownership registers, or transaction-level BFIU intelligence. It cannot independently verify the manuscript's claims about annual laundering totals, the amount allegedly transferred through mobile financial services, the claimed amount associated with manpower recruitment, the reported cloth-laundering figure, or the alleged return of funds in a particular foreign investigation. The article therefore discusses these as unverified claims unless corroborated by a traceable source. The design also cannot estimate a national causal effect of laundering on inflation, reserves, GDP growth, or employment.

6. Channels and Mechanisms of Money Laundering

6.1 Trade misinvoicing

Trade transactions provide a potentially attractive channel because they involve large values, complex supply chains, multiple intermediaries, and differences in product quality, freight, insurance, and valuation. Over-invoicing imports can be used to transfer excess value to a foreign seller or related entity; under-invoicing exports can leave part of the export proceeds offshore. Conversely, under-invoicing imports or over-invoicing exports may be used for other forms of tax, duty, or incentive manipulation. The direction and purpose of a transaction must be established from evidence; no single pricing anomaly proves laundering.

USA and Bangladesh's dependence on international trade and the concentration of export activity in particular sectors make customs valuation, origin verification, quantity checks, and beneficial-ownership analysis important. The peer-reviewed studies by Milon and colleagues provide evidence of vulnerabilities in port and export processes, but their qualitative findings should not be extrapolated into a national monetary estimate without representative transaction data.

6.2 Hundi and informal value-transfer systems

Hundi is an informal value-transfer arrangement in which agents in different locations settle obligations through trust-based networks, often without a corresponding formal cross-border bank transfer for each customer transaction. Such arrangements may be used for legitimate family remittances, but they can also be exploited to move value outside formal reporting and foreign-exchange controls. The policy challenge is to distinguish legitimate users from criminal exploitation while improving the price, speed, accessibility, and reliability of formal remittance channels.

6.3 Misuse of remittance and cash-incentive systems

Where public incentives are attached to formal remittances, weak identity verification or false documentation may create opportunities for duplicate claims, fictitious transactions, or circular transfers. Such risks require transaction-level reconciliation between sending institutions, receiving banks, mobile financial service providers, and government incentive systems. The presence of a remittance incentive is not itself evidence of laundering.

6.4 Banking, mobile financial services, and cash transactions

Banks and mobile financial service providers can be misused through false identities, nominee accounts, mule accounts, rapid movement between accounts, structuring, or transactions inconsistent with a customer's known profile. A sound AML programme uses customer due diligence, beneficial-owner identification, ongoing monitoring, record keeping, suspicious-transaction reporting, and risk-based controls. Small transactions are not automatically suspicious; patterns, purpose, customer profile, and contextual indicators matter.

6.5 Virtual assets and cryptocurrency

Virtual assets can move across borders quickly and may involve pseudonymous addresses, exchanges, peer-to-peer services, and intermediary service providers. These characteristics create tracing and supervisory challenges, although blockchain transparency can also support forensic analysis. It is inaccurate to state that all cryptocurrency activity is anonymous or illicit. The relevant risks depend on the asset, service provider, jurisdiction, customer controls, and transaction pattern. FATF's standards address virtual assets and virtual-asset service providers within the broader AML/CFT framework.

6.6 Real estate, companies, and high-value assets

Real estate, luxury goods, corporate vehicles, trusts, and nominee arrangements may be used to integrate criminal proceeds into assets that appear legitimate. The key vulnerability is often opacity: investigators may be unable to identify the natural person who ultimately owns or controls an asset. Beneficial-ownership registers, source-of-wealth checks, professional-gatekeeper obligations, and reliable asset declarations can reduce this risk.

6.7 Other alleged channels in the original manuscript

The source manuscript also refers to credit cards, foreign investment, secret data collection, and 'cloth laundering'. These items require more precise definitions and evidence before they can be treated as established channels. Credit-card misuse may be part of fraud or laundering in particular circumstances,

but ordinary card payments do not constitute laundering. Foreign investment can be lawful and productive; it becomes relevant to laundering only where the investment conceals criminal proceeds or ownership. The phrase 'cloth laundering' is not a standard technical category in the cited literature and should be replaced with a clearly evidenced description of customs evasion, commercial smuggling, or trade misinvoicing if that is what the underlying evidence demonstrates.

7. Economic Implications

7.1 Foreign-exchange availability and reserve management

Laundering and associated illicit outflows may reduce the amount of foreign currency entering or remaining in the domestic financial system. Export proceeds retained abroad, false import payments, and informal settlement can weaken formal foreign-exchange supply and complicate monitoring. However, official reserves are a stock of qualifying external assets controlled by the monetary authorities, not a simple sum of all foreign currency held by residents or all funds that might hypothetically return. A return of assets to all counties would affect reserves only if the funds were transferred to, acquired by, or otherwise recorded as qualifying reserve assets under the applicable rules.

Bangladesh Bank reports reserves under more than one presentation. Its monthly series distinguishes gross reserves from reserves calculated under the IMF's BPM6 framework. For example, the Bangladesh Bank monthly data show December 2024 gross reserves of USD 26.2148 billion and BPM6 reserves of USD 21.3947 billion; June 2025 values were USD 31.7720 billion and USD 26.7400 billion, respectively (Bangladesh Bank, n.d.; Bangladesh Bank, 2025). Comparisons must use the same reserve definition and date.

7.2 Exchange rates and inflation

A reduction in foreign-exchange supply can contribute to depreciation pressure, especially when import demand, external debt service, capital flows, and market expectations are also considered. Currency depreciation may raise the domestic price of imported fuel, food, intermediate goods, and capital equipment. This can contribute to inflation, but the relationship is not automatic or one-directional. Monetary policy, global commodity prices, domestic supply constraints, fiscal policy, exchange-rate management, and expectations also influence inflation.

Accordingly, a hypothetical amount of laundered money cannot be added to reserves and then used to calculate a new exchange rate by proportional scaling. Exchange rates are market and policy outcomes shaped by demand and supply across many transactions, not a mechanical ratio of reserves to a combined notional total.

7.3 Public revenue and development expenditure

When laundering is linked to tax evasion, customs fraud, corruption, or hidden ownership, it can weaken public revenue. Lower revenue can constrain investment in education, health, transport, climate resilience, and social protection, or increase reliance on borrowing and indirect taxation. The fiscal effect depends on the underlying offence and the tax or duty legally due; it should not be estimated by multiplying a trade balance by an assumed exchange-rate difference.

7.4 Investment quality and productivity

Illicit capital may enter real estate, financial assets, or businesses without being allocated according to productivity or social return. This can inflate asset prices, disadvantage compliant firms, and create incentives for rent-seeking. At the same time, not all outward investment is harmful. A credible analysis must distinguish lawful diversification and investment from concealment of criminal proceeds.

7.5 Competition, employment, and institutional trust

Businesses that evade taxes, customs duties, or labour obligations may undercut compliant competitors. This can distort market selection, discourage formalisation, and reduce confidence in public institutions. Where corruption and laundering become entrenched, skilled workers and productive entrepreneurs may perceive the business environment as unfair or unpredictable. These are plausible institutional pathways, but the size of the effect in all countries requires empirical investigation.

7.6 Terrorist financing and organised crime

Money laundering and terrorist financing are related but distinct. Laundering generally concerns disguising the criminal origin of funds; terrorist financing concerns providing or collecting funds for terrorist purposes, and the funds may originate from either lawful or unlawful sources. The two systems can share channels, intermediaries, and vulnerabilities. Policy analysis should avoid treating every laundering case as terrorist financing or assuming that every informal transfer is linked to terrorism.

8. Critical Audit of the Manuscript's Quantitative Illustrations

This section preserves the numerical examples in the submitted manuscript as an audit trail. The purpose is not to validate the estimates but to show what can and cannot be inferred from the stated inputs. All values below are expressed in the units used in the source manuscript unless otherwise noted.

8.1 Global estimate of 2–5% of GDP

The manuscript states that 2–5% of global GDP, or approximately USD 800 billion to USD 5.5 trillion, is laundered annually. The percentage range is a historical estimate commonly attributed to the IMF in 1998, while FATF cites the UNODC estimate of 2.7% of global GDP (USD 1.6 trillion) for 2009. These are not interchangeable reference periods. The USD 800 billion–USD 5.5 trillion range should not be presented as a current annual amount unless a specific global GDP year and calculation are supplied. Recommended treatment: report the historical 2–5% estimate with its provenance and caveat, and separately report the 2009 UNODC estimate.

8.2 United States reserve and exchange-rate example

The manuscript assumes USD 300 billion in annual laundering, adds this to USD 255.69 billion in reserve assets, and obtains USD 555.69 billion. It then scales a USD/GBP rate of 0.75 by the ratio 555.69/255.69 to obtain approximately 1.63. This is not a valid exchange-rate model. The sum combines a hypothetical annual flow with a reserve stock; the units are not temporally comparable. Moreover, reserve holdings alone do not determine the bilateral exchange rate. The resulting difference of 0.88 cannot be used to infer trade savings.

The manuscript next multiplies a UK trade difference of USD 45.8 billion by 0.88 and reports USD 40.30 billion in savings. This multiplication has no defensible causal basis: a bilateral exchange-rate change cannot be inferred from the preceding reserve arithmetic, and the trade balance is not the same as the value of imports exposed to a currency movement. A valid trade-cost estimate would require product-level import values, currency invoicing, pass-through assumptions, quantities, and a defensible exchange-rate counterfactual.

8.3 US interest calculation

The manuscript assumes USD 300 billion was deposited in 2000 at a 9.5% annual interest rate for 26 years. Under simple interest, the arithmetic is: interest = principal × rate × years = 300 × 0.095 × 26 = USD 741 billion; principal plus interest = USD 1,041 billion. The arithmetic is correct under those assumptions, but the assumptions are not supported: the rate is not shown to remain constant for 26 years, the timing of deposits is not specified, the balance is not adjusted for withdrawals, fees, taxes, or risk, and simple interest is not the usual assumption for a continuously reinvested bank balance. It is therefore an illustrative arithmetic exercise, not an estimate of actual lost national wealth.

If annual compounding at a constant 9.5% were assumed, the formula would instead be FV = 300 × (1.095)^26, which is substantially larger. That alternative is not more realistic merely because it compounds; it still depends on an unsupported constant rate and a single deposit date. Neither method can establish that the United States 'lost' or 'could have earned' that amount.

8.4 Bangladesh over-pricing and reserves example

The manuscript reports Tk 6,830 crore transferred abroad through over-pricing over ten years and converts this at Tk 122 per USD: Tk 6,830 crore ÷ 122 = approximately USD 55.98 crore, or USD 559.8 million. The conversion is arithmetically consistent if the input is indeed Tk 6,830 crore and the exchange rate is Tk 122 per USD. The underlying Tk 6,830 crore estimate, however, requires a traceable source and a defined measurement method.

The manuscript then states that reserves were USD 21,394 crore. This appears to confuse crore and billion: USD 21.394 billion equals USD 2,139.4 crore, not USD 21,394 crore. Bangladesh Bank's December 2024 BPM6 figure is USD 21.3947 billion, while gross reserves were USD 26.2148 billion. The figure should be cited with the exact date and reserve definition (Bangladesh Bank, n.d.).

Even after correcting the unit, adding a historical estimate of outflows to current reserves does not calculate a counterfactual reserve balance. Such a calculation would need to establish when each outflow occurred, whether it would otherwise have been held by the central bank, whether it would have been spent or invested domestically, and how subsequent transactions and valuation changes would have affected the balance.

8.5 Trade difference and alleged inflation loss

The manuscript gives 2024 imports of USD 48,048,710 thousand and exports of USD 31,734,162 thousand. Their difference is USD 16,314,548 thousand (USD 16.314548 billion). This subtraction is arithmetically correct. However, the trade deficit is not a measure of laundering or over-pricing. Multiplying the trade deficit by a hypothetical Tk 0.32 per USD produces approximately Tk 5,220,655 thousand, or Tk 5.221 billion, but this is only a mechanical conversion of a hypothetical rate difference. It does not demonstrate an inflation loss or a laundering amount.

8.6 Aggregate black-money estimate and accumulated returns

The manuscript reports aggregate black money of Tk 16,96,60,870 million, converts it into US dollars, adds it to reserves, derives an exchange rate of Tk 915 per USD, and multiplies the trade difference by the resulting Tk 793 difference. These steps cannot be accepted as a reproducible estimate. The initial aggregate lacks a traceable source and a clear definition; the conversion must be checked for scale and denomination; domestic undeclared wealth is not automatically an offshore outflow; and the derived exchange rate is not economically valid. The subsequent 5% return calculation also needs a defined compounding convention, timing, and eligible principal.

The article therefore does not carry forward the resulting Tk 32,34,475 crore total or the claim that it could cover four annual budgets. The conclusion does not follow from a validated model. A defensible replacement would estimate separate components—verified tax arrears, adjudicated proceeds, customs-duty losses, confirmed illicit outflows, and recovered assets—rather than aggregating unlike categories.

8.7 Summary of quantitative audit

Original claim or operation	Audit result	Recommended treatment
Global laundering equals 2–5% of GDP and USD 0.8–5.5 trillion annually	Historical percentage benchmark; dollar range lacks a clearly specified contemporary base year	Cite the historical estimate and the UNODC 2009 estimate separately; disclose uncertainty.
USD 300bn added to USD 255.69bn reserves to infer USD/GBP	Invalid stock-flow combination and exchange-rate formula	Remove as a quantitative finding.
USD 45.8bn trade difference × 0.88 = USD 40.30bn savings	No causal or trade-cost model supports the multiplier	Remove or replace with a documented exchange-rate pass-through model.
USD 300bn × 9.5% × 26 = USD 741bn simple interest	Arithmetic correct under unsupported assumptions	Retain only as a hypothetical illustration with explicit assumptions, not as actual loss.
Tk 6,830 crore ÷ Tk 122/USD = USD 55.98 crore	Arithmetic broadly correct; source for principal estimate unverified	Label as author-reported estimate pending documentary verification.
USD 21,394 crore reserves	Unit conversion appears wrong; USD 21.394bn = USD 2,139.4 crore	Use Bangladesh Bank's dated gross or BPM6 figure consistently.
2024 imports minus exports = USD 16.314548bn	Subtraction correct for stated inputs; not proof of laundering	Call it a reported trade gap/deficit, verify data source and valuation basis.
Trade deficit × assumed exchange-rate change	Not a valid estimate of inflation or laundering loss	Remove causal interpretation.
Black-money total and derived Tk 915/USD exchange rate	Untraceable input and invalid reserve-based exchange-rate formula	Do not report as a finding without a verifiable dataset and model.

8.8 Requirements for a reproducible future estimate

A future quantitative study should build a transaction- or sector-based dataset with, at minimum: (a) the reporting year and fiscal/calendar-year convention; (b) original currency and unit; (c) source institution and downloadable dataset; (d) import/export partner and HS product code; (e) FOB/CIF valuation

convention; (f) quantity and unit price; (g) freight and insurance adjustments; (h) exchange-rate source and date; (i) a documented statistical threshold for identifying anomalies; and (j) a validation procedure using customs audits, investigations, or court outcomes. Estimates should be reported as ranges with sensitivity tests, not as exact criminal proceeds.

9. Ethical Dimensions and Institutional Responsibilities

9.1 Consequentialist analysis: John Stuart Mill

From a utilitarian perspective, the morality of an action is evaluated through its consequences for overall welfare. Laundering can produce social harm by sustaining predicate crimes, distorting competition, weakening tax collection, and undermining trust. Where these consequences reduce public welfare, laundering is ethically objectionable. This framework also requires policymakers to consider the costs of AML controls: excessive de-risking, discriminatory profiling, or unjustified account closures can harm innocent customers and small businesses. Ethical policy should therefore maximise public benefit while protecting due process and access to finance.

9.2 Virtue ethics: Aristotle

Aristotelian virtue ethics emphasises character, purpose, and the habits that support a just community. Financial institutions and public agencies should cultivate honesty, fairness, accountability, and practical wisdom. A system in which officials accept bribes, professionals conceal beneficial ownership, or institutions prioritise revenue over legal duties weakens the virtues on which public trust depends. The purpose of financial intermediation is to support legitimate exchange and investment; using those institutions to conceal criminal proceeds contradicts that social purpose.

9.3 Deontological ethics: Immanuel Kant

Kantian ethics assesses conduct according to duty and the possibility of universalising the maxim behind an action. Deliberately misrepresenting the source, ownership, or purpose of funds treats regulators, counterparties, and the public as instruments rather than as agents entitled to truthful dealing. A maxim that permits systematic deception for private advantage cannot be reconciled with a trustworthy system of financial disclosure. This analysis is stronger when it focuses on deliberate deception and evasion than when it treats ordinary cash deposits or privacy-preserving financial conduct as inherently unethical.

9.4 Ethical duties of financial institutions

- Customer due diligence: identify customers and beneficial owners, understand the purpose of the relationship, and apply enhanced measures where risks justify them.
- Transaction monitoring: use proportionate, explainable monitoring to identify patterns inconsistent with the customer's profile and investigate alerts promptly.
- Suspicious reporting: submit reports when legal thresholds are met, protect confidentiality, and avoid tipping off subjects where prohibited.
- Staff training: ensure employees understand red flags, escalation procedures, and the limits of their authority.
- Leadership and culture: reward compliance and integrity rather than short-term revenue; manage conflicts of interest and disciplinary failures.
- Technology governance: validate analytics and machine-learning systems, monitor false positives, protect personal data, and ensure human review.
- Cooperation: share information lawfully with regulators, FIUs, customs, tax authorities, and law enforcement, subject to privacy and due-process safeguards.

10. Policy Recommendations

1. Strengthen trade-data analytics. Link customs declarations, bank payment records, shipping manifests, tax information, export incentives, and corporate ownership data so that risk indicators can be assessed together.
2. Prioritise beneficial-ownership transparency. Require accurate, updated information on the natural persons who ultimately own or control companies, trusts, and high-value assets; verify rather than merely collect declarations.
3. Improve customs valuation and post-clearance audit. Use product-level reference prices as screening tools, not automatic proof, and direct investigative resources toward anomalies supported by additional evidence.
4. Reduce incentives for informal remittance settlement. Improve the speed, cost, accessibility, and exchange-rate competitiveness of formal remittance channels while ensuring proportionate customer onboarding.
5. Enhance supervision of banks and mobile financial services. Apply risk-based customer due diligence, account-linkage analysis, agent oversight, and effective monitoring of mule-account networks.
6. Strengthen inter-agency coordination. Establish clear protocols among BFIU, Bangladesh Bank, National Board of Revenue, customs intelligence, law enforcement, company registries, and prosecutors.
7. Improve asset tracing and recovery. Use mutual legal assistance, international cooperation, civil and criminal asset-recovery tools, and transparent procedures for the management and return of recovered assets.

8. Publish better statistics. Report STR/SAR volumes, dissemination, investigations, prosecutions, convictions, confiscations, and recovered assets as distinct indicators, with clear definitions and time periods.
9. Protect rights and financial inclusion. Ensure AML controls are proportionate, risk-based, non-discriminatory, appealable, and consistent with privacy and due-process obligations.
10. Invest in specialist capacity. Train investigators, prosecutors, judges, auditors, customs officers, and financial-sector compliance staff in TBML, digital evidence, forensic accounting, and cross-border investigations.

11. Discussion

The evidence reviewed supports the proposition that money laundering is a material governance and financial-integrity risk for Bangladesh, but it does not support a single precise national total in this desk-based study. The strongest Bangladesh-specific evidence in the reviewed literature concerns trade-related vulnerabilities, including over-invoicing, under-invoicing, misdeclaration, and documentary abuse in export and port processes. BFIU's annual report demonstrates that suspicious reporting and financial intelligence are active components of the national response. Bangladesh Bank's reserve series also illustrates why macroeconomic analysis must use consistent definitions and dates.

The relationship between laundering and macroeconomic instability is best understood as a set of transmission mechanisms rather than a one-variable formula. Illicit outflows may reduce formal foreign-exchange supply; tax and customs evasion may weaken public revenue; corrupt allocation may lower investment quality; and opaque ownership may undermine confidence. Yet inflation, exchange rates, and reserves are also shaped by global prices, monetary and fiscal policy, remittances, exports, imports, debt service, expectations, and capital flows. Any empirical claim that laundering caused a particular percentage of depreciation or inflation requires a model that controls for these factors.

The numerical audit is therefore a central contribution of the article. It shows that correct arithmetic does not guarantee valid economic inference. A multiplication may be numerically accurate while its inputs or causal interpretation are invalid. Likewise, a large figure can appear persuasive while combining different currencies, stocks and flows, or incompatible time periods. Publication-quality research should make these distinctions explicit and should welcome independent replication.

12. Conclusion

Money laundering threatens economic development not simply because money crosses borders, but because the concealment of criminal proceeds weakens the institutions that make markets, taxation, investment, and public administration function fairly. Trade-related transactions, informal value-transfer arrangements, opaque ownership, cash-intensive activity, and misuse of financial services warrant continued attention. Available peer-reviewed research identifies vulnerabilities in export and port

processes, while BFIU reporting and the statutory AML framework demonstrate the existence of institutional mechanisms for prevention and detection.

The study also finds that some of the original manuscript's numerical claims require substantial correction or withdrawal. The global 2–5% figure is historical and uncertain; reserve assets cannot be augmented by adding hypothetical laundering flows; exchange rates cannot be calculated by proportional scaling of reserves; trade deficits are not measuring of laundering; and the accumulated-return examples depend on unsupported assumptions.

The central policy conclusion is that countries should pursue a coordinated, risk-based, evidence-led AML strategy. This strategy should combine transparent beneficial ownership, integrated trade and financial data, effective supervision, accessible formal remittance channels, skilled investigation, international cooperation, and accountable asset recovery. At the same time, safeguards must protect legitimate customers, privacy, due process, and financial inclusion. Future research should move beyond broad national estimates toward reproducible sectoral analysis based on transaction-level evidence and transparent uncertainty ranges.

Declarations

Funding

The author declares that no external funding was received for this research.

Author contribution

The author declares sole responsibility for the conception, preparation, analysis, and writing of this manuscript.

Competing interests

The author declares no competing interests.

Ethics approval and consent

This study is based on documentary and publicly available secondary sources and did not involve human participants or personal data collection. Formal ethics approval was therefore not sought. The author’s original manuscript included a consent-to-publish declaration; the journal's required declaration format should be completed at submission.

Data availability

No new primary dataset was generated. The sources used are identified in the references. The numerical audit is reproducible from the inputs explicitly stated in Section 8, subject to the limitations described.

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