

Compliance Without Preservation

Why Ghana's road maintenance funds keep failing, and the four changes that would matter most

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Abstract. Ghana has created a dedicated road maintenance fund twice — in 1997, and again in 2025. Neither has arrested the deterioration of the network. The constraint this memo can document is not the absence of ring-fenced financing but the way the financing statutes are drafted: the maintenance floor pools preservation with repair, the arrears duty carries no deadline, the performance-contracting mandate carries no target, and the levy has no mechanism for adjusting itself. Each instrument can be complied with in full while the network gets worse. In 2025 the Ministry of Roads and Highways budgeted 45.3% of its appropriation to its Road and Bridge Construction programme — construction, major rehabilitation, reconstruction and upgrading — and 3.78% to routine and periodic maintenance combined. This memo traces the mechanism from primary sources and proposes four changes, ordered by what each requires to work.

A note on currency. Figures are in Ghana cedis (GH¢) throughout. The memo's central argument concerns the erosion of a nominal cedi amount, so converting to dollars would obscure the mechanism it describes. Pre-2007 figures are in old cedis (¢) and are marked as such; Ghana redenominated in July 2007 at 10,000:1.

1. The backlog

Ghana's classified road network is 94,203 km: 14,948 km trunk, 28,480 km urban, and 50,775 km feeder.¹ The Ministry of Roads and Highways reports network condition as a good / fair / poor mix, and its own figures show 47% good in 2023 and 47% in 2024, against a 2025 target of 48% rising to 60% by 2027.² The Minister for Roads and Highways reported 44% of validated roads in good condition at the close of 2025.³ That reads as a decline against the series above, but the previous Minister gave the same 44% good figure in September 2024, against a differently constituted series.⁴ The two may describe the same measurement rather than a fall, and public sources do not settle which.

Ghana's sector objective, set out in the rolling road sector Strategic Plans, is 70% good / 20% fair / 10% poor.⁵ Against that objective, the Ministry's own figures put 21% of the network in poor condition in 2023 and again in 2024, the only years for which actuals are published. On 94,203 km, a 21% poor share is approximately **19,800 km requiring rehabilitation or reconstruction**, not routine care.

1.1 What these figures can and cannot support

Four qualifications, stated here so the rest of the memo can rely on them.

They are self-reported. The condition series is the Ministry's assessment of its own performance. This memo uses it anyway, because it is the only network-wide series that exists and because the argument runs in the direction where the bias helps: if the Ministry's own assessment shows a fifth of the network in poor condition against 3.78% of appropriation going to preservation, that is not a contested figure but an admission.

They are length-weighted, not traffic-weighted. Feeder roads are 50,775 km — 54% of the network — and carry a small fraction of traffic. Condition thresholds are also class-relative: a gravel feeder road assessed as good is good *for a gravel feeder road*. The aggregate therefore understates the condition experienced by the average road user.

The network figure is stale. In September 2024 the then-Minister stated that a national road network inventory and condition survey was underway and that preliminary figures projected the network at roughly 100,000 km on completion, naming several completed corridors not yet captured in the data.⁴ The 2025 estimates still carry 94,203 km, unchanged across all six forecast years; the same figure appears in the 2023 MTEF, and the then-Minister described it in September 2024 as the position at the end of 2023.⁴ At least two incompatible condition series circulate against that same denominator.⁶

The methodology is not public. Act 1147 makes the Road Condition Index the first factor in the allocation formula and defines it as a composite measure determined by operational guidelines issued under the Act — so the measurement standard sits outside the statute.⁷ The Act also makes it an offense to manipulate or fabricate road condition survey results, carrying the same penalty band as misappropriating money from the Fund.⁸ That is not evidence of falsification. It indicates the drafters regarded the survey as a control point rather than a neutral input.

None of this weakens the argument below, because the argument turns on the *ratio* between measured condition and preservation spending, which survives considerable error in either figure.

1.2 Field observations

Two observations from travel in Ghana in June 2026.

The journey from Kpong to Elmina — approximately 245 km, taking a northern route via Akropong, Aburi and Nsawam specifically to avoid construction-related congestion on the direct corridor — took over nine hours on roads that avoided metropolitan traffic almost entirely. Traffic routinely crossed into oncoming lanes to pass ditches and potholes that could not be driven through.

Separately, reaching communities in Asuogyaman District, Eastern Region — where the Volta Lake divides the district in two, and where the district assembly's own budget records that poor road conditions negatively affect business generally and the transport of agricultural produce in particular⁹ — took two hours from Kpong to cover under twenty kilometers of separation. The health outreach I was traveling with existed on the premise that this difficulty deterred people from seeking treatment. The clinic at Kpong was the most capable facility we saw; the outposts further out held little beyond basic supplies. Excursions were ended at the first rain, because the return could not be relied on afterwards.

Asuogyaman records roughly 185.9 km of district road network, of which 130.2 km is tarred and 55.7 km untarred.⁹ At 30% untarred it is better provisioned than the national average of 73%.¹⁰

1.3 What earlier work found

A search of the University of Utah library catalog for prior studies of Ghanaian and West African road infrastructure, made after this memo was first published, returned five peer-reviewed studies of Ghana's road sector that bear on it — one of them reached by following a citation in another to its reference list — and one on power-sector partnerships that was set aside. The five share a frame.

Amoatey and Ankrah, the earliest, tabulated 48 rehabilitation and reconstruction contracts executed between 2002 and 2013, of which 33 overran, and in 2016 asked 123 practitioners — road-agency staff, contractors, consultants and development partners in roughly equal numbers — to rank twenty-three causes of delay; "delay in payment by owners (government)" ranked first for every group but contractors, who ranked it second.¹¹ Barajei and colleagues surveyed 449 engineers and quantity surveyors on 290 public road construction projects completed in the five years to 2022, to rank the factors that make a construction project succeed.¹² Aboagye and colleagues asked 43 staff of the three road agencies which competencies a road project manager needs.¹³ Poku-Boansi, Asuah and Cobbinah measured transport demand and supply in three peri-urban communities outside Sunyani.¹⁴ Luong and Azuma, in the only book-length treatment, asked whether the road system "developed in the first decade of the twenty-first century" and "helped bring its residents closer to the metropolitan areas, was welfare enhancing," and estimated that it was.¹⁵

Each asks how roads get built, what building them requires, or what building them yields. None asks how a built road is kept. Two of the five touch maintenance and neither studies it. Amoatey and Ankrah open with a paragraph on why timely maintenance matters and then study why construction contracts finish late. Luong and Azuma record, in a sentence of history, that the Road Fund was set up in 1985 "with the main objective of creating more funding channels for road maintenance" and that Act 536 "expanded the Road Fund mandate to other activities such as the upgrading and rehabilitation of roads" — an expansion they report without remark, and which section 2.1 takes up.¹⁵

Where these studies reach a remedy, it is either a call for better institutions in general or a call for compliance with a rule that already exists. Luong and Azuma close with "high-quality and transparent political institutions." Amoatey and Ankrah, whose top-ranked cause was payment, recommend that "adequate and reliable funding is secured before projects are embarked upon" — a commitment rule — and that the law be strengthened so that contractors are compensated for late payment, which would raise the interest the stock accrues.¹¹ Barajei and colleagues recommend "strict compliance with the Public Financial Management Regulation," on the ground that it "does not permit the government to sign a contract without an available budget," and a law "to make it unlawful for a project that has commenced to be abandoned by a new government."¹² The first assumes the rule is the constraint. The second would lock in the commitments that section 2.5 identifies as the source of the arrears. None of them asks whether the rules governing the maintenance fund can be met while the network deteriorates, which is the question here.

Two limits on this. The studies measure what practitioners rate as important, or what a household's wealth did after a road arrived, or how late a contract finished; none measures what happened to a road after it was built, so they neither support nor contradict a diagnosis located in fund design. And a catalog search is not the literature. The international road-fund literature — the World Bank's design guidance of the 1990s and its later reviews — was not surveyed beyond the 2011 country diagnostic cited in section 2.1.

2. The financing mechanism

2.1 Two funds in forty years

Network expansion under the Economic Recovery Programme of the 1980s put maintenance and rehabilitation costs beyond the reach of the Ministry's annual budgetary provisions. The Road Fund was established by legislative instrument in 1985 and restructured under the **Road Fund Act, 1997 (Act 536)** specifically to address that gap and to end reliance on budgetary allocation for maintenance.¹⁶

The pooling that section 2.4 turns on dates from that Act. Its long title and its object clause direct the Fund to finance "routine, periodic maintenance and rehabilitation of public roads," and section 11 lists the charges on the Fund as one list — routine and periodic maintenance, then upgrading and rehabilitation — with no floor under either and no priority between them. The Board's power over the levy was to "recommend to the Cabinet" its level.¹⁷ Luong and Azuma, the only academic study located that notices the 1997 change, describe it as an expansion of the mandate and do not ask what it did to maintenance.¹⁵

In August 2025 the **Road Maintenance Trust Fund Act, 2025 (Act 1147)** repealed Act 536 outright and established the Road Maintenance Trust Fund as a body corporate.¹⁸ The stated rationale was governance. The Act introduced offenses for misappropriation, a formula-based allocation system, mandatory technical audits, and a fifteen-member Board of Trustees inaugurated in December 2025.

The reform is real. It is also aimed at a different constraint from the one this memo documents.

It is also the second time the Fund has been found compliant. The World Bank's 2011 country diagnostic concluded that "Ghana meets almost all of the best practice guidelines for road sector institutions," that the levy was, as of 2006, "commensurate with road maintenance needs," and — under the heading of challenges — that adjusting the levy's real value was "essential if Ghana is to sustain its relatively good performance on road network preservation."¹⁹ The diagnostic did more than score governance. It benchmarked network condition, compared spending against maintenance and rehabilitation needs taken together, and tested the levy against those needs, and found each adequate as of 2006. This memo does not revisit that assessment. It examines one thing the later statute does with the money the diagnostic found adequate: an allocation rule that sets a single floor over preservation and rehabilitation together, so that compliance with the rule says nothing about the split between them. The diagnostic's warning on the levy's real value stands. The levy has been adjusted twice in the fifteen years since.

The Board is not independent of the Minister. Of the Board's members, only three are nominated by bodies outside government — the Association of Road Contractors, the Ghana Institution of Engineering, and the Ghana Institution of Surveyors. The road user and the civil society representative are both nominated by the Minister. Quorum is eight and the chairperson holds a casting vote.²⁰ Decisively, section 12 provides that the Minister may give written policy directives on matters of policy and that the Board **shall comply**. The Minister also determines which activities constitute each maintenance category (s.30(2)), sets the allocation formula weights (s.32(2)), must authorise any regional re-allocation in writing (s.32(7)), designates emergency works that bypass the Annual Maintenance Plan (s.33), and approves the arrears payment schedule (s.57(3)).

Governance and revenue live in different statutes. Act 1147 governs the fund. The Road Fund Levy itself sits in the Schedule to the Energy Sector Levies Act, 2025 (Act 1135). Parliament reformed the fund's governance in 2025 without touching the revenue rate, because the rate is not in that statute.

The Fund is a payment mechanism, not a contracting party. Section 53 provides that the Fund shall not enter into road maintenance contracts, is not liable for acts or omissions under them, operates solely as a financial mechanism for receipt, allocation and disbursement, and — despite anything to the contrary in any enactment — that its moneys and assets are not subject to execution, attachment or seizure in satisfaction of any court judgment relating to payment for a road maintenance contract. The Minister confirmed this publicly, noting that unlike GETFund or the NHIS, the RMTF is not authorised to award contracts but must ensure that works undertaken by the road agencies are properly certified and paid for.²¹

A contractor therefore holds an enforceable contractual claim against the implementing agency — the Ghana Highway Authority, the Department of Urban Roads, or the Department of Feeder Roads — and no enforceable claim against the entity holding the money. There is a defensible rationale: without an attachment bar, the first contractor to obtain judgment could seize the pool and every other contractor would recover nothing. The consequence is nonetheless that payment timing is governed by a schedule the Minister approves, and that a judgment against an agency cannot be executed against the Fund's assets.

2.2 The revenue base

The Fund is financed principally by a levy on petroleum products, supplemented by tolls, vehicle registration and inspection fees, transit fees from foreign carriers, and axle-load penalties.²² **The Road Fund Levy is GH¢0.48 per liter** on petrol, diesel, marine gas oil and naphtha, set as a specific amount in the Schedule to Act 1135.²³ In July 2026 Parliament extended the levy to fuel oil.²⁴

Collection runs from the pump through oil marketing companies to the Ghana Revenue Authority, which lodges receipts into dedicated accounts at the Bank of Ghana.²⁵ Two structural features matter.

The rate is specific, not ad valorem. It is a fixed amount per liter rather than a percentage of pump price, so its real value erodes with inflation between legislative amendments and its revenue grows only with fuel volume.

It has no mechanism for adjusting itself. The levy stood at roughly GH¢0.06–0.07 per liter from redenomination in 2007 until 2015; moved to GH¢0.40 when the Energy Sector Levies Act, 2015 (Act 899) consolidated it into the ESLA framework; and moved to GH¢0.48 under the ESLA (Amendment) Act, 2019 (Act 997), assented 19 August 2019.²⁶ It has moved twice in nineteen years, on both occasions as part of a wider legislative exercise rather than as a scheduled adjustment. Ghana's consumer price index stood at 278.45 in 2019 and 855.78 in 2025.²⁷ The longer record shows the same. Inflows to the Road Fund were GH¢25.5m in 2000 and GH¢272.6m in 2015 — a nominal compound rate of about 17% a year, which after consumer price inflation is under 1% a year — and fell from 5.3% of domestic revenue to 1.0%.²⁸

The Ministry of Finance identified the mechanism itself. Its 2019 report on energy sector levies records the Road Fund Levy being increased that year to correct for the loss in value resulting from consumer price inflation without commensurate increases in the fixed specific-type levies.²⁹ It acted once and has not acted since.

The toll base was also removed and has only recently returned. Road tolls were abolished in the 2022 Budget Statement, presented November 2021, on the argument that congestion costs exceeded revenue forgone.³⁰ Tolls had been contributing roughly GH¢78m annually.³¹ In 2026 Parliament approved a twenty-year public-private partnership to reintroduce automated tolling, with 70% of gross toll revenue to Government and 30% to the operator.³²

A minor note on collection. The Ministry of Finance has recorded shortfalls between amounts collected and amounts lodged, arising partly from a 9% retention by the Ghana Revenue Authority under the GRA Act — which the Ministry itself describes as conflicting with ESLA's requirement that all collections be lodged, and recommends resolving by amendment. The Road Fund Levy shortfall was 16.8% in 2016 but total ESLA lodgment shortfall had fallen to about 2.5% by 2019.³³ The leakage is real, lawful, and no longer material at scale.

2.3 Two pots: what the appropriation actually funds

Road spending flows through two parallel channels, not one. The Ministry's appropriation and the Fund's allocation are additive: the 2025 estimates state that the total approved budget ceiling **excluding the Road Fund** is GH¢3,244,979,700, and the 2024 tables list the ministry total and the Road Fund as separate rows that sum to the sector grand total.³⁴

Pot one — the appropriation. Total GH¢3,244,979,701:

Programme	2025 (GH¢)	Share
Road & Bridge Construction (<i>construction, major rehabilitation, reconstruction and upgrading; bridges</i>)	1,470,845,174	45.3%
Road Rehabilitation & Maintenance	1,365,373,611	42.1%
– of which Routine Maintenance	15,772,405	0.49%
– of which Periodic Maintenance	106,999,429	3.30%
– of which Minor Rehabilitation	1,242,601,777	38.3%
Management & Administration	334,765,852	10.3%
Road Safety & Environment	73,995,064	2.28%

At programme level, maintenance appears close to parity with construction. Disaggregated, **91% of the maintenance programme is minor rehabilitation** — culverts, drainage structures and minor upgrading on roads that have already deteriorated. Act 1147 defines rehabilitation as restoring a road that has deteriorated through age, wear or damage, expressly excluding routine and periodic maintenance.³⁵ It is corrective work, not preservation.

Genuine preventive maintenance — routine plus periodic — is GH¢122,771,834, or 3.78% of the appropriation. Spread across 94,203 km, that is approximately **GH¢1,303 per kilometer per year**.

The three categories sit on a deterioration timeline. Routine maintenance is continuous and preventive, aimed at preserving current condition — pothole patching, grading, vegetation control, drain clearing. Periodic maintenance is planned and cyclical, restoring a road to near-original condition before failure — surface dressing, resealing, regravelling. Rehabilitation is what is required once the first two have been skipped. Ghana's allocation is concentrated at the most expensive end of that sequence.

Note that the Minister determines by Gazette which activities fall in each category,³⁶ so the boundaries are movable by ministerial act.

2.4 The fund pays for the past

Pot two — the Fund. In 2024 the Road Fund received approximately GH¢4.8bn. Of the GH¢4.90bn applied:³⁷

Application	GH¢	Share of applications
Arrears to contractors	3,706,766,080	75.7%
Repayment of a loan taken by the Fund	448,825,900	9.2%
Current-year maintenance programme	743,889,444	15.2%
Total	4,899,481,424	

The Fund had borrowed against future revenue: GH¢448.8m of the year's applications went to repaying a loan it had taken out. Roughly six cedis in every seven went to servicing past obligations. Unpaid invoices held at the Secretariat at end-2024 stood at GH¢5.66bn — more than a full year of revenue.

The Ministry's own performance indicator confirms the consequence. Against a target of covering 70% of routine maintenance needs from the Fund, actual coverage was **40% in 2023 and 45% in 2024**. The figures for periodic maintenance are identical.³⁸

The new fund inherited the position by statute. Section 57(1) transfers the rights, assets and liabilities of the former Road Fund; section 57(3) requires the new Fund to verify and validate all outstanding arrears and to honour payment of verified arrears in accordance with a phased payment schedule approved by the Minister. Parliament did not merely permit the transfer — it obliged the new fund to pay.

Parliament approved **GH¢3.6bn** for the RMTF, of which **GH¢2.8bn** is allocated to maintenance, rehabilitation, emergency and safety programmes. Against revenue performance of **GH¢3.1bn**, outstanding contractor liabilities stood at **GH¢10.5bn** as at end-June 2026 — approximately **3.4 times annual revenue**.³⁹

GH¢2.8bn is 90.3% of GH¢3.1bn. Section 31(1) requires the Board to allocate at least ninety per cent of annual revenue exclusively to routine, periodic and emergency maintenance *and rehabilitation*. The reported figures are consistent with the floor. They are rounded press figures; the report does not establish that the two are matched to the same year or that every component of the GH¢2.8bn falls within the statutory numerator, and no audited statement has been published, so whether the floor is met in law cannot be verified from them. What they do show is the shape of the rule: one pooled number reported against one pooled floor.

A note on denominators. The two limbs of section 31 are measured against different bases. Section 31(1) sets the maintenance floor as a proportion of annual revenue; section 31(2) caps administrative expenditure as a proportion of total disbursements. Revenue and disbursements need not be equal in a given year, so the two constraints are not additive and the residual available for other purposes cannot be derived exactly from either figure alone.

Because rehabilitation sits inside it, a fund could allocate the entire protected ninety per cent to repairing failed roads, nothing to preserving sound ones, and remain fully compliant. Whether the RMTF has done so cannot be determined: **the split inside that GH¢2.8bn is not published**. The Act requires reporting against the ninety per cent aggregate and not against the four categories it separately defines in section 30(1), so the statutory test does not generate the number that would answer the question. That is a design feature of the floor, not an omission in the reporting.

Act 1147 draws the distinction it needs. Section 30(1) classifies maintenance into four categories and section 55 defines rehabilitation as excluding routine and periodic work. Section 31(1) then declines to use that distinction in the Act's only binding allocation rule.

2.5 The mechanism

Arrears do not arise inside the Fund. They arise on the construction side and are settled from it.

1. Construction commitments are made on a multi-year basis at a pace unconstrained by maintenance cash flow. The Big Push programme covers more than 2,000 km across sixteen regions, with close to GH¢50bn in multi-year commitments approved.⁴⁰ An investigation using Right to Information requests alleged 81 sole-sourced contracts worth over GH¢73bn awarded within seven months.⁴¹ Sole-sourcing removes the friction — advertisement, evaluation, review — that ordinarily paces commitment against cash.
2. Certified work produces Interim Payment Certificates. These are contractual obligations against the implementing agency, not against the Fund.
3. Every standard form of works contract that Ghana's Public Procurement Authority publishes entitles the contractor to interest on late payment — the 2003 medium-contract conditions after 28 days, the minor-works conditions at compound interest at the Bank of Ghana's rate, the 2019 medium and major forms, built on FIDIC, at monthly compounding.⁴² On contracts large enough to enforce it, the arrears compound. The Auditor-General's 2019 audit of the Tetteh Quarshie–Madina road found every one of the 96 cedi-component payment certificates it could date paid late, by 39 to 986 days beyond the contractual 56, and interest claims of GH¢19.0m and US\$0.56m within a final cost of GH¢170.5m and US\$50.0m.⁴³ It is not enforced everywhere. Amoatey and Ankrah observed in 2016 that local contractors "often lack the capacity to take the government on legally and demand payment and other interest charges," so on small domestic contracts the cost of delay sits on the contractor's borrowing rather than on the state's books.⁴⁴ Which form, and which completed conditions, govern the routine-maintenance contracts now in arrears could not be established.
4. Ring-fenced maintenance revenue is the most liquid pool available, so obligations are settled from it first.
5. Preventive maintenance absorbs the residual — 3.78%.
6. Roads deteriorate past the point where routine work is effective. A 66 km reconstructed stretch of the Tarkwa–Agona Nkwanta road, built at a cost of €95m, showed significant deterioration in under two years.⁴⁴ The Fufulso–Sawla road in the north — 147.5 km, completed in 2015 on a US\$156m African Development Fund grant — was found by the Bank's own

2019 evaluation to have degraded in part, with poor maintenance threatening the sustainability of its benefits, and was reported potholed on portions six years after its inauguration.⁴⁵

7. Rehabilitation is a construction expense. Return to step one.

The sector has ranked this the same way for a decade. Amoatey and Ankrah, surveying 123 practitioners in 2016, found "delay in payment by owners (government)" — meaning delay "in honouring payments for certificates that have been presented by the contractor for work done" — ranked first of twenty-three delay factors by road-agency staff, consultants and development partners alike, and second by contractors; the party that pays ranked its own delay first, and the authors observed that the delay "is common with government-funded projects and projects executed by local contractors," not donor-financed ones.¹¹ Barajei and colleagues, surveying 449 practitioners in 2022, found cash flow first of twenty-six success factors with the lowest dispersion of any item, and attribute it to "the government's inability to honor interim payment certificates of contractors and consultants"; two-thirds of that sample were contractor staff, which the earlier study's balance answers.¹² The paying side has since said the same.

The scale is acknowledged. The Minister stated in 2025 that government owed road contractors approximately GH¢25bn with outstanding commitments exceeding GH¢100bn, and that some Interim Payment Certificates had been unpaid since 2018.⁴⁶

Who waits longest is the finding. At the Board's inauguration the Minister flagged the position of small and medium contractors, many of whom have not been paid since 2019, despite handling roadside weeding, drain clearing and pothole repairs.⁴⁷ That is the statutory definition of routine maintenance. The contractors performing the cheapest and most preventive work in the system are the ones seven years in arrears. It is also where deferral costs the state least: the contractors least able to claim interest are the ones left longest unpaid. The record shows that this is so. It does not show that this is why.

Act 1147 does not break the loop. Section 31(1) pools rehabilitation with preservation, so nothing in the floor prevents step five. Section 57(3) writes the arrears onto the Fund by statute. Section 53 bars execution against the Fund's moneys on judgments relating to maintenance contracts. Section 23 prohibits the Fund's moneys from being invested, securitised or subjected directly or indirectly to any financial arrangement, foreclosing refinancing of the stock — a provision enacted for good reason, given that the Fund had itself borrowed and spent GH¢448.8m of 2024 revenue on repayment. **The Act assigns the stock to the Fund and bars the Fund from refinancing it.**

2.6 What cuts the other way

Three qualifications, stated plainly.

The state does pay, and in very large sums. The Minister stated that as at the end of July 2026 government had disbursed GH¢23.1bn to clear road contractors' arrears and fund Big Push projects, the bulk of it arrears.⁴⁸ This is not a government that pays nothing. It is a flow rather than a stock: liabilities still stood at GH¢10.5bn at end-June, the disbursement included payments to Big Push contractors — that is, for construction — in a share the statement does not give, and small contractors doing routine maintenance remained unpaid from 2019. The state can move very large sums quickly when it chooses, which makes the *composition* of what it pays a choice rather than a constraint.

Causal direction is not proven. This memo argues that commitments crowd out preservation. An alternative reading is that preservation is underfunded because it is politically invisible, and that arrears are a symptom rather than the mechanism. The available evidence is consistent with both, and public

sources do not separate them.

There is a second arrears channel. Donor suspension under the debt restructuring stalled eleven major road projects independently of the domestic fund.⁴⁹ Cocoa roads, financed through COCOBOD and accounting for around 66.8% of total COCOBOD debt, constitute a third channel this memo does not cover.⁵⁰

2.7 Why a recognized priority stays unfunded

Every budget statement this memo cites names roads a priority, and section 2.6 shows the state moving very large sums to the sector. The public ranks it the same way: in Afrobarometer's 2019 round, 26% of Ghanaians named infrastructure and roads as the most important problem facing the country, ahead of unemployment at 18%, and 59% named it among their top three — the first time since 2002 that the category has led.⁵¹ Amoatey and Ankrah opened their 2016 study by noting that road delay "has been a priority for government" and that "the situation has not improved over the years."¹¹ The question the figures raise is why a priority that is funded does not produce preservation. Public sources cannot test an answer. The sector's own literature offers one.

Barajei and colleagues, discussing their survey, attribute the payment failure to politics: "Governments in their attempt to please electorates by far exceed budget for road construction projects, resulting in severe payment challenges." The sentence carries no citation. It is the authors' characterization, from a sample of which two-thirds were contractors.¹² The study they draw on for the mechanism, Damoah and Kumi's interviews on failed government construction projects, records incoming administrations abandoning predecessors' projects to pursue their own, and project leaders chosen for party rather than competence; it is a study of public construction generally, on interview evidence, not a measured rate for roads.⁵² Luong and Azuma, arguing for more investment, record from the general political-economy literature that governments "respond to political and individual interests rather than to economic efficiency" and that "incumbents who seek to be reelected often select large-scale projects as highlights to attract voters' approval." Their citations are studies of the United States and Europe, not of Ghana.¹⁵

None of these is measured. What can be said from the primary record is that the pattern they describe is the pattern observed: close to GH¢50bn in multi-year Big Push commitments approved for named corridors; 81 contracts alleged sole-sourced in seven months; GH¢23.1bn disbursed in a year, the bulk of it to arrears, with Big Push contractors among those paid; and the contractors who clear drains and patch potholes unpaid since 2019. A commissioning is attributable to the government that holds it. A reseal is not. A levy increase is attributable, at the pump, to the government that made it. That asymmetry is consistent with everything above. It is not demonstrated by it, and this memo does not claim that it is.

What follows for section 4 is that none of the four recommendations asks the incentive to change. A published terminal date, a split floor, an indexed rate and a coverage target are each drafted so that compliance shows in a published number, whether or not the executive comes to prefer preservation. A rule that works only if the preference changes will be complied with and not achieved, which is the pattern in section 2.5. A rule whose breach is visible is not thereby enforced — section 5 records existing controls whose application cannot be established — but it is the only kind that gives anyone something to enforce. Section 4.6 says who.

3. What it would cost

What can be computed. Routine and periodic maintenance in the 2025 appropriation total GH¢122.8m across 94,203 km — approximately GH¢1,303 per kilometer per year. The Ministry's own indicator reports that the Road Fund met 45% of routine maintenance need in 2024, against a 70% target.

What cannot. The two figures belong to different channels. The GH¢1,303 is derived from the Ministry's appropriation; the 45% measures coverage by the Road Fund; published reporting does not consolidate the two, nor state the need in cedis against which either is measured. An earlier version of this memo divided the one by the other to produce a national funding gap of about GH¢150m a year. That calculation is withdrawn: a coverage ratio from one channel cannot be applied to spending from another, and acknowledging the mismatch did not make the result an estimate. Computing the gap would require three things, none of which is published: a consolidated statement of routine and periodic maintenance spending across the appropriation and the Fund; the Ministry's assessed need for the same categories, in cedis, for the same year; and the split of the Fund's GH¢2.8bn between preservation and rehabilitation.

The asymmetry does not depend on the gap. The entire 2025 appropriation for routine and periodic maintenance, GH¢122.8m, is less than the cost of five kilometers of Big Push road at the lowest reported award rate of about GH¢25m per kilometer, and less than one kilometer at the highest.⁵³

The backlog is not costed here, deliberately. Rehabilitating roughly 19,800 km of poor-condition road is a separate and far larger problem, and per-kilometer costs in the current market vary roughly six-fold with scope — reported Big Push awards range from about GH¢25m/km to about GH¢154m/km.⁵³ No credible aggregate can be produced from that spread without a scope-matched unit cost, which is not publicly available. The point stands regardless: the backlog exists because the recurrent gap was never closed, and closing the recurrent gap is cheap relative to the cost of continuing to rebuild.

4. Recommendations

Four measures. They interlock: the third without the second sends every additional cedi to arrears; the second without the first puts the Fund in breach of section 57(3); the first without the fourth clears a backlog that regenerates. Neither of the first two requires new revenue, and the first requires no legislation at all.

4.1 Publish the arrears schedule with a terminal date

The Minister should publish the arrears payment schedule, with a terminal date for full repayment. Nothing downstream can be planned around an open-ended liability.

This is not a new deliverable. Section 57(3) requires the Fund to honour verified arrears in accordance with a phased payment schedule **approved by the Minister**. Section 57(4) required the Minister, in consultation with the Minister for Finance, to issue transition guidelines within six months of the Act coming into force — Gazette notification was 14 August 2025, so the deadline fell in mid-February 2026. In August 2026, on the adoption of the Committee of the Whole's report, Parliament recommended that the Ministry develop and implement a phased strategy aimed at reducing outstanding arrears in a systematic and transparent manner,⁵⁴ which suggests the statutory schedule does not exist.

The Act is capable of setting deadlines. Section 35(4) fixes a hard 30 September date for submission of Annual Maintenance Plans; section 28(3) gives the Auditor-General six months to audit. The provision governing GH¢10.5bn is open-ended.

The table is an illustration, not a forecast. It divides the end-June 2026 stock by a term, holds revenue at GH¢3.1bn in nominal terms, and makes no allowance for interest accruing on the stock — which section 2.5 shows can be substantial on large contracts — or for new arrears added while it is paid down. Against GH¢3.1bn annual revenue, less an allowance for administration:

Horizon	Annual arrears payment	Share of revenue	Remainder for current work
5 years	GH¢2.10bn	68%	~GH¢850m
7 years	GH¢1.50bn	48%	~GH¢1.45bn
10 years	GH¢1.05bn	34%	~GH¢1.90bn

The remainder column applies the section 31(2) cap to revenue rather than to disbursements, which is not the base the Act uses; see the note on denominators in section 2.4. At this scale the approximation does not affect the comparison that follows.

The 2024 current-year maintenance programme was approximately GH¢744m. On those assumptions, even a five-year schedule leaves more for current work than was actually spent last year. The assumptions are why a schedule has to be published rather than inferred: with interest and new arrears included, the clearance term at a fixed nominal levy is longer than any row of the table, which is why section 4.3 treats indexation as the recommendation on which the others' timetable depends. What the illustration shows is narrower than affordability. It shows that a schedule can be written, and that without one nothing downstream can be planned.

Needed: ministerial action alone. No legislation, no new revenue. **Complete when:** a schedule is published in the *Gazette* with a terminal date, within one budget cycle.

4.2 Split the allocation floor in section 31(1)

Amend section 31(1) to establish a distinct floor for routine and periodic maintenance, separate from rehabilitation.

The Act already contains the distinction, and the pooling it declines to use is inherited: Act 536's object clause and charges list ran maintenance and rehabilitation together in 1997 (section 2.1). Section 30(1) classifies maintenance into four categories; section 55 defines rehabilitation as restoring roads that have already deteriorated, expressly excluding routine and periodic work. Section 31(1) then pools all four into a single ninety per cent floor.

The effect is visible in the current allocation. GH¢2.8bn of GH¢3.1bn revenue is 90.3% — consistent with the floor as reported — while routine and periodic maintenance in the 2025 appropriation total GH¢122.77m, or 3.78%. The Act has the vocabulary and does not deploy it in its only binding allocation rule.

Needed: one clause from Parliament. No new revenue. **Complete when:** the Fund reports its allocation to routine and periodic maintenance separately from rehabilitation, and the reported preservation share rises in the first year after amendment; delivery to be tested against the coverage indicator the Ministry already

publishes (section 2.4). **Falsified if:** the preservation share is published and does not move. The diagnosis would then be wrong.

4.3 Index the fuel levy

Convert the Road Fund Levy to an indexed specific rate, adjusted annually to the Ghana Statistical Service consumer price index. The charge remains a fixed amount per liter; only the adjustment becomes automatic rather than discretionary.

The levy has stood at GH¢0.48 since August 2019. Ghana's consumer price index stood at 278.45 that year and 855.78 in 2025. The rate has not moved, and on the historical pattern it moves only when swept into a wider legislative exercise — twice in nineteen years.

The means to change it exist. The Energy Sector Shortfall and Debt Repayment Levy, charged on the same liter of fuel, rose from GH¢0.95 to GH¢1.95 on petrol with effect from 16 July 2025 under a certificate of urgency, over organized transport-operator opposition, raising GH¢8.81bn in its first year.⁵⁵ Rates were set product by product — LPG and naphtha were left unchanged. In July 2026 Parliament amended the same Schedule again, extended the Road Fund Levy to fuel oil, and left its rate untouched: it edited that row for coverage while declining to touch its value.

This is the only recommendation here that is politically contested. It is also the one on which the others' timetable depends. At GH¢0.48 unindexed, clearing the arrears on any row of the table in section 4.1 takes between a third and two-thirds of revenue before interest; what that leaves for preservation is not established, and nothing published shows that both can be funded at the current rate.

Needed: an indexation clause, or a rate adjustment reflecting cumulative CPI since 2019. **Complete when:** the rate is set by formula rather than by amendment.

4.4 Attach a coverage target to the performance-contracting mandate

Performance-based contracting transfers deterioration risk to the contractor. Payment is tied to sustained service levels over a multi-year term, so the commercial incentive is to maintain rather than to be re-engaged for repair.

Ghana has already legislated this. Section 3(d) requires the Fund to prioritise performance-based contracts and link disbursement to independently verified performance outputs. Section 36(1)(b) specifies the metrics — pavement roughness, response time to defects, traffic disruption, durability. Section 36(2)(c) requires disbursements verified by independent engineers or auditors.

Ghana has also already piloted it. The World Bank and EU-supported Transport Sector Improvement Project ran six output- and performance-based road contracts across approximately 1,050 km of trunk and feeder roads in the Upper West, Bono East and Northern regions, with 752 km of rehabilitation completed by December 2023 and the maintenance phase underway.⁵⁶

What is missing is a target. Section 36 says "prioritise" and defines no coverage percentage, no timetable, and no consequence for non-adoption. Section 54 empowers the Minister to make Regulations providing for criteria and indicators for performance-based allocations. The instrument exists.

One caveat: the pilot is donor-financed, and donor disbursement was suspended across eleven projects during the debt restructuring. A scaling commitment should not assume that financing is continuous.

Needed: Regulations under section 54. No primary legislation. **Complete when:** a percentage of the trunk and feeder network under performance-based contract is published against a stated year.

4.5 A note on verification

Section 55 defines a performance certificate as issued by an independent engineer, auditor or other designated monitoring authority. Section 36(3), however, provides that the Fund shall not make payment unless a performance and payment certificate has been issued by **the relevant implementing agency**. The independent engineer verifies; the agency remains the gatekeeper on transmission. Certification is therefore still performed within the body that awarded the contract. Closing that gap is a smaller fix than it appears and would strengthen every recommendation above.

4.6 Who would enforce it

The fair question is why these rules would bind when the existing ones have not: the section 57(4) guidelines fell due in February 2026 and no schedule has been published; the section 33(4) reports under Act 921 cannot be found. The answer this memo can give is limited. Each proposal converts a duty into a published number — a gazetted terminal date, a preservation share reported under section 31, a rate set by formula, a coverage percentage against a year — and a published number is what the existing monitors are built to act on and currently lack. The Auditor-General must audit the Fund within six months of year-end (s.28(3)) and reports to Parliament; the Act requires the Board's technical audits to be published (s.52(2)) and promises a public dashboard (s.3(g)). None of these can find a breach of a rule that produces no figure. Whether they act on one they can find is not established here, and the record of the section 57(4) deadline is not encouraging. What can be said is that a rule stated as a number moves the question from whether the law was complied with to whether the number was met, and the second is the question an auditor, a committee or a reporter can ask.

5. What this does not address

These four measures clear the existing stock of arrears and protect preservation spending from being absorbed by rehabilitation. They do not constrain the rate at which new commitments are made.

Arrears originate on the construction side. Contracts awarded faster than the state can settle them generate certificates that become obligations, and those obligations have historically been met from ring-fenced maintenance revenue. In 2024, GH¢3.71bn of Road Fund receipts went to arrears and a further GH¢448.8m to repaying a loan the Fund had itself taken. Section 57(3) now writes that inheritance into statute.

The structural fix is commitment control: no road contract awarded unless the multi-year liability it creates is registered against a forward provision. The rule exists in terms, not only in outline. The Public Financial Management Act, 2016 (Act 921) prohibits any public officer from committing Government to a financial liability without specific authorization (s.25(4)); requires every contract that commits Government to a payment to be entered in the Ghana Integrated Financial Management Information System (s.25(6)); requires the Minister for Finance's clearance before a covered entity signs a multi-year contract (s.25(7)); and bars any commitment binding Government beyond one financial year without the Minister's prior written approval and Parliament's authorization under article 181 of the Constitution (s.33(1)). Section 33(4) requires the Minister to report to Parliament each year on the performance of those commitments.⁵⁷ Section 39 of Act 1147 requires the Fund to interface with the same system. The sector literature's remedy for irregular cash flow is compliance with these provisions.¹² The remedy is not new to that literature: Amoatey and Ankrah concluded in 2016, the year Act 921 was passed, that "adequate and reliable funding" should be "secured before projects are embarked upon."¹¹ Ten years later the liability stock is 3.4 times revenue. The 81 sole-sourced awards in section 2.5 and a liability stock of 3.4 times annual revenue are the

evidence that they do not bind, and the argument of this memo throughout is that a rule which can be complied with in form is not a constraint. Whether the section 33(4) reports are laid, and what they record, could not be established from public sources. Designing a commitment control that binds would require the commitment data those reports should contain, and this memo does not attempt it.

6. Conclusion

Ghana's road maintenance problem has been diagnosed as an institutional problem twice and answered with an institution twice. Act 536 created a ring-fenced fund. Act 1147 gave it parliamentary accountability, criminal penalties, a formula-based allocation, and mandatory technical audits. Neither addressed the arithmetic. The one outside assessment that benchmarked the first found it met nearly every best-practice criterion; the one binding test of the second is reported as met.

The current Act contains almost every instrument the sector needs. It fails on where the boundaries are drawn: a maintenance floor that pools preservation with repair, a performance-contracting mandate with no target, an arrears duty with no deadline and no remedy against the Fund's assets, and a levy with no mechanism for adjusting itself. Each of these can be complied with in full while the network deteriorates — and the one instrument with a number attached, the ninety per cent floor, is reported as met in 2026 while preservation in the Ministry's budget stayed at 3.78%.

The fix is not a third institution. It is a published schedule, one clause, an indexation formula, and a coverage target.

Limitations

Sources are overwhelmingly governmental. Condition data, allocation figures and coverage indicators come from the Ministry of Roads and Highways. Arrears figures come from ministerial statements and parliamentary reporting.

No recent independent assessment of the Fund's finances exists. The most recent is the Auditor-General's performance audit of July 2006; the World Bank's 2011 diagnostic benchmarked the Fund's design against road-fund criteria, not its accounts. The Auditor-General's 2025 report on the management of the District Assemblies Common Fund and other statutory funds does not substantively cover the Fund, so no independent verification of the 2025 position was available. This is itself a finding about fiscal transparency in the sector.

Whether the section 57(4) transition guidelines were issued could not be established directly. The conclusion that they were not rests on Parliament's August 2026 recommendation, which is indirect evidence. The Auditor-General's silence is not evidence on this question either way.

Motive is not tested. Section 2.7 sets out the explanation the sector's literature offers and the primary facts consistent with it. It does not determine why the specific decisions of 2025–26 were taken as they were — whether deferral of arrears reflects fiscal constraint under the IMF programme, competing political priorities, or something else. That distinction would require access this analysis does not have.

Prior studies were located by catalog search, not by systematic review. Section 1.3 covers the five peer-reviewed studies of Ghana's road sector that a September 2026 search of the University of Utah library catalog returned, one of them reached by following a citation in another. It does not survey the

international road-fund literature, and work in languages other than English was not searched.

Construction quality is not assessed. The argument is that deferred maintenance causes premature failure, not that roads are built to inadequate standards. The latter is a different claim requiring engineering evidence.

Six items remain unverified: whether the Public Procurement Authority approves contracts above a value threshold; which standard form and completed conditions govern the routine-maintenance contracts in arrears; whether the annual reports on multi-year commitments required by section 33(4) of Act 921 are laid before Parliament; whether the 2024 national road inventory and condition survey completed and what it reported; what "validated" denotes in the end-2025 condition figure; and whether the section 3(g) public dashboard and section 52(2) published technical audits exist.

One figure is a proxy. The GH¢1.19bn Road Fund allocation is the 2024 approved figure; the 2025 Road Fund ceiling does not appear in the Ministry's estimates.

The recurrent gap is not estimated. An earlier version of this memo combined a per-kilometer figure from the Ministry's appropriation with a coverage indicator that measures the Road Fund to produce a GH¢150m annual figure. Section 3 withdraws it and states what would be needed to compute one.

The composition of the RMTF's allocation is not public. The Fund's reported allocation is consistent with the section 31(1) floor; neither compliance in law nor the division of that allocation between preservation and rehabilitation can be verified from published figures.

Method and assistance

This memo is built on primary sources — Ghana's statutes, the Ministry of Roads and Highways' budget estimates, parliamentary reporting, and the Auditor-General's 2006 performance audit — together with fieldwork in Eastern Region in June 2026.

Prior studies of the sector (section 1.3) were located by a manual search of the University of Utah library catalog in September 2026, after the memo was first published and in response to a reader's review; one further study was reached by following a citation in another to its reference list. Six sources were retrieved; five are discussed in section 1.3, and one, on power-sector public-private partnerships, was set aside as off-sector. Two models, Claude and GPT-6 Astra, read the retrieved sources in full and reported on them, and located the primary documents added in this revision — the contract conditions, the Auditor-General's 2019 audits, the Road Fund inflow series, the survey results and the evaluation of the Fufulso–Sawla road. I checked every passage cited against the source at the page given. The catalog search, the choice of what to use, and the editorial decisions were mine.

Claude (Anthropic) was used throughout as a research and drafting collaborator: locating and reading primary documents, working through statutory text, checking arithmetic, and producing draft prose to my direction. Three further models cross-checked the finished draft for factual accuracy before publication.

The thesis, the fieldwork, the source selection and the editorial judgement are mine, as are any remaining errors.

Annex: the precedent

This annex establishes recurrence. Its figures are from 2000–2004 in pre-redenomination cedis and are not used to support any claim about the present.

The Road Fund was created in response to the same dynamic this memo describes. The Auditor-General's 2006 performance audit records that expansion of the road network under the Economic Recovery Programme of the 1980s put maintenance and rehabilitation costs far beyond the support of the Ministry's annual budgetary provisions, and that the Road Fund was established to generate revenue for maintenance and end dependence on budgetary allocation.⁵⁸

The mechanism, stated in 2006. Opening its findings, the audit attributes rising maintenance need mainly to the construction of more roads and a backlog of poorly maintained ones resulting from inadequate funding.

Structural deficit, 2000–2004. Revenue of ₵2,462.33bn against maintenance expenditure of ₵2,590.22bn — a deficit of ₵127.82bn, about 5% of budget. The audit notes this occurred **even under controlled budgeting, where agencies were only permitted to submit maintenance programmes at the level the Road Fund could afford.**

Coverage of need. In October 2003 the Director of the Road Fund stated the Fund expected to generate about ₵630bn against ₵1.3 trillion needed to maintain the network — a shortfall of 51.5%. The audit describes this as a consistent annual pattern.

Roughly half of need met in 2003. Roughly half met in 2024. Two decades, two statutes.

Real erosion, measured in output. Kilometers achieved per billion cedis fell across 2000–2003 for nearly every agency. The audit's conclusion: contract costs increased at a faster rate than revenue collection, with the ultimate effect a sizeable backlog of poorly maintained roads.

The warning. The audit concluded that the fuel levy, the dominant contributor, is not fixed by the Road Fund Board, and that because levies affect petroleum prices their effect on the national economy is weighed before any decision — reinforcing that over-dependence on the fuel levy would not be sustainable in the long run.

Legislative inertia. Tolling proposals submitted from April 2001 remained unimplemented at the time of the audit in March 2005, held at the Ministry awaiting parliamentary approval; the Ministry's legal section confirmed they had been ready for some time but were on hold. Four years of forgone revenue from a step nobody took.

The separation predates the statute. The audit deliberately did not cover road maintenance itself, because the Road Fund has only a limited supervisory role and maintenance is the function of the implementing agencies. Fund disburses, agencies execute, and no single body owns the outcome — operating in 2006, written into statute as section 53 in 2025.

Corroborating record. The World Bank's implementation completion report notes that in 1999 the Road Fund account at the Bank of Ghana was virtually frozen, with annual disbursement collapsing.⁵⁹ A related project delivered approximately 84% of its appraised road length, largely because of delays of up to seven

years between appraisal and execution.⁶⁰ The same reports record that periodic maintenance works were to be undertaken mainly by local contractors while heavier rehabilitation was packaged for international competitive bidding — the contracting model this memo recommends scaling.

The chain. 1980s expansion outruns the ministry budget → 1997 fund created in response → 1999 account frozen → 2000–2004 structural deficit → 2003 half of need met → 2006 Auditor-General warns the model is unsustainable → 2015 and 2019 levy adjustments → 2024 half of need met → 2025 new statute → 2026 liabilities at 3.4x revenue.

Notes

1. Ministry of Roads and Highways, *Programme-Based Budget Estimates for 2025* (MTEF 2025–2028). <https://www.mofep.gov.gh/sites/default/files/pbb-estimates/2025/2025-PBB-MRH.pdf>
2. Ibid., Policy Outcome Indicators and Targets. Years from 2025 are targets, not actuals.
3. "44% of Ghana's validated roads in good condition as 2025 ends – Roads Minister," Adom Online, 28 January 2026. <https://www.adomonline.com/44-of-ghanas-validated-roads-in-good-condition-as-2025-ends-roads-minister/>
4. Francis Asenso-Boakyie, then Minister for Roads and Highways, quoted in "Govt record in road infrastructure devt unparalleled – Asenso-Boakyie," Ghanaian Times, 19 September 2024. <https://ghanaiantimes.com.gh/govt-record-in-road-infrastructure-devt-unparalleled-asenso-boakyie/> — a national road network inventory was ongoing, with preliminary figures projecting the network would reach 100,000 km on completion; the network stood at 94,203 km at the end of 2023, up from 78,403 km at the end of 2016.
5. African Development Fund, *Republic of Ghana: Road Infrastructure Project (Eastern and Western Regions) — Appraisal Report*, June 2003, §3.1.2, which states the programmes aim at "a network condition mix established at around 70% good, 20% fair and no more than 10% poor." The same report projects the objective being missed, forecasting 59% good / 27% fair / 14% poor by 2005. No more recent Ghanaian policy document restating the 70/20/10 objective could be located. https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Ghana_-_Road_Infrastructure_Project_-_Appraisal_Report.pdf
6. MoRH, *2025 PBB Estimates*, network tables, giving roughly 47% good / 32% fair / 21% poor for 2023 and 2024. Compare Asenso-Boakyie, September 2024 (see note 4), giving 44% good / 34% fair / 22% poor against the same 94,203 km denominator. This memo uses the PBB series throughout; mixing the two would combine figures that do not reconcile.
7. Road Maintenance Trust Fund Act, 2025 (Act 1147), ss.32(1)(a), 55. <https://imccod.gov.gh/wp-content/uploads/2026/01/ROAD-MAINTENANCE-TRUST-FUND-ACT-2025-ACT-1147.pdf>
8. Act 1147, s.48; compare s.40.
9. Asuogyaman District Assembly, *Composite Budget for 2024–2027: Programme-Based Budget Estimates for 2024*, p. 7 ("Road Network") and p. 13 ("Water Supply"). https://mofep.gov.gh/sites/default/files/composite-budget/2024/ER/Asuogyaman_.pdf
10. Kwasi Amoako-Attah, then Minister for Roads and Highways, quoted in "We'll build better, safer roads in Ghana," Ministry of Roads and Highways. <https://mrh.gov.gh/well-build-better-safer-roads-in-ghana-roads-minister/> — total network 94,203 km, 27% paved, 73% unpaved.
11. Charles Teye Amoatey and Alfred Nii Okanta Ankrah, "Exploring critical road project delay factors in Ghana," *Journal of Facilities Management* 15(2), 2017, pp. 110–127. Contract data on 48 road projects, "mainly rehabilitation and reconstruction contracts," executed 2002–2013 (Table AII, pp. 125–126), and a 2016 questionnaire returned by 123 of 160 practitioners in four groups. Rankings by relative importance index, Table AI (pp. 123–124): "delay in payment by owners (government)" first overall and for road-agency staff, consultants and development partners, second for contractors, with no significant difference between groups. The paper states the index denominator as 160 rather than the 123 returned, which deflates every score equally; rankings are unaffected and index values are not quoted here. The paper's widely repeated averages — 17 months' delay, 22.5% cost overrun — rest on the same 48 rows, several of which are internally inconsistent, and are not used. The quotations on priority, on honouring certificates, on government-funded projects and on capacity to claim interest are at pp. 111, 116 and 117; the recommendation to secure funding before award at p. 119. The statement at p. 117 that there is "no form of compensation" for late payment is Addo-Abedi (1999) as cited in Tuuli et al. (2007), and predates the 2003 standard tender documents (note 42). <https://doi.org/10.1108/JFM-09-2016-0036>
12. Chelteau Barajei, Nongiba A. Kheni, Emmanuel Appiah-Kubi, Humphrey Danso and Abdul Wahab Iddrisu, "Enhancing the success of Ghanaian public road construction projects," *Cogent Engineering* 10(1), 2023, article 2199514. A survey of 449 engineers and quantity surveyors — 65% contractor staff, 26% consultants, 9% road-agency staff — on 290 public road projects completed in the five years before the survey. Cash flow: mean 6.96 of 7, standard deviation 0.31, the highest mean and lowest dispersion of twenty-six items (Table 2, p. 9). The attribution to unpaid interim payment certificates and the "please electorates" sentence are at p. 13; the latter carries no citation. The recommendations on the Public Financial Management Regulations and on abandonment are at pp. 16–17. The paper cites Amoatey and Ankrah (note 11) as "Amoatey and Okanta (2017)"; its reference list is correct. <https://doi.org/10.1080/23311916.2023.2199514>
13. Jones Nyame Aboagye, Ernest Kissi, Alex Acheampong and Edward Badu, "Assessment of competencies to promote best project management practices for road infrastructure projects in Ghana," *Journal of Engineering, Design and Technology* 22(2), 2024, pp. 438–455. Forty-three respondents from the Ghana Highway Authority, the Department of Feeder Roads and the Department of Urban Roads. <https://doi.org/10.1108/JEDT-07-2021-0378>
14. Michael Poku-Boansi, Augustine Yaw Asuah and Patrick Brandful Cobbinah, "Contextualizing transport infrastructure and services in Ghanaian peri-urbanism," *International Planning Studies* 23(2), 2018, pp. 195–209. One hundred households in three communities, surveyed in 2014. <https://doi.org/10.1080/13563475.2017.1396963>

15. Tuan Anh Luong and Zenas Azuma, *On the Road to Economic Prosperity: The Role of Infrastructure in Ghana*, Cambridge Elements: Economics of Emerging Markets (Cambridge: Cambridge University Press, 2022). The research question is at p. 4; the Road Fund history and the statement that the Fund "met nearly all the best practice guidelines," citing the World Bank's 2010 Ghana infrastructure diagnostic, at p. 14; the political-economy statements at p. 55, where the works cited are studies of the United States and Europe. The Element's headline estimate — that a 10% fall in travel time between 2000 and 2015 raised the household wealth index by 1.2% — loses significance under its own region-fixed-effects and alternative-instrument checks (Table 6) and is not relied on here. Its statement that Road Fund inflows rose "20 percent" a year after inflation between 2000 and 2015 (p. 2) does not follow from the figures it gives, GH¢25.5m and GH¢272.6m, which compound at about 17% a year in nominal terms; see note 28. <https://doi.org/10.1017/9781009029360>
16. Auditor-General, *Performance Audit Report of the Auditor-General on the Funding of the Ghana Road Fund* (Edward Dua Agyeman, Auditor-General), transmitted to the Speaker of Parliament 3 July 2006, Ref. AG.01/109, §1.1 "Reasons for the audit" (para. 1, p. 1) and §2.1 "Historical background" (paras. 16–17, p. 5). The audit attributes the maintenance shortfall to network expansion under the Economic Recovery Programme and records the Fund as established by the Road Fund Act, 1997; it does not address the 1985 legislative instrument. The report is published at https://audit.gov.gh/files/audit_reports/Performance_Audit_Report_of_the_Auditor-General_on_the_funding_of_Ghana_Road_Fund.pdf Road Fund Act, 1997 (Act 536). <https://opencontentghana.wordpress.com/wp-content/uploads/2013/11/road-fund-act-1997-act-536.pdf>
17. Road Fund Act, 1997 (Act 536): long title ("to finance routine and periodic maintenance and rehabilitation of public roads"); s.2(1) ("The object of the Fund is to finance routine, periodic maintenance and rehabilitation of public roads in the country"); s.6(2)(d) (the Board shall "recommend to the Cabinet after consultation with the Minister for Finance the level of the road levy and other road user charges"); s.11 (charges on the Fund: "(a) routine and periodic maintenance of road and related facilities; (b) upgrading and rehabilitation of roads; (c) road safety activities; (d) selected road safety projects; and (e) such other relevant matters as may be determined by the Board"). Assented 29 August 1997. <https://opencontentghana.wordpress.com/wp-content/uploads/2013/11/road-fund-act-1997-act-536.pdf>
18. Act 1147, ss.1, 56(1). Date of assent and *Gazette* notification: 14 August 2025.
19. Vivien Foster and Nataliya Pushak, *Ghana's Infrastructure: A Continental Perspective*, World Bank Policy Research Working Paper 5600 (Washington, D.C.: World Bank, March 2011), "Roads: Achievements" and "Challenges," pp. 10–11 — the published version of the 2010 Africa Infrastructure Country Diagnostic report that Luong and Azuma cite (note 15). Its condition figure, three-quarters of the network in good or fair condition on data from about 2006–08, is consistent with the 79% good-or-fair in the Ministry's 2023–24 series (note 6): the poor share has sat at a fifth to a quarter of the network for two decades. Table 16 (p. 37) lists underfunding of road maintenance among the sector's recoverable efficiency losses. <https://documents1.worldbank.org/curated/en/525051468250877163/pdf/WPS5600.pdf>
20. Act 1147, ss.4(1), 8(3), 8(5), 12.
21. Kwame Govers Agbodza, Minister for Roads and Highways, remarks at the inauguration of the RMTF Board of Trustees, 9 December 2025, reported in "Road maintenance fund board inaugurated," Graphic Online, 11 December 2025. <https://www.graphic.com.gh/news/general-news/ghana-news-road-maintenance-fund-board-inaugurated.html>
22. Act 1147, s.22.
23. Energy Sector Levies Act, 2025 (Act 1135), Schedule. See also "Ghana Energy Sector Levies: Current Rates," TaxLawGH, reviewed 24 July 2026. <https://www.taxlawgh.com/ghana-energy-sector-levies>
24. Energy Sector Levies (Amendment) Bill, 2026, passed 31 July 2026. <https://regfollower.com/ghana-increases-energy-sector-levies-on-fuel-oils-introduces-road-fund-charge/> The Finance Minister's floor remarks of the same date are reported at <https://www.gbcghanaonline.com/news/business/parliament-energy-levy/2026/>. Sources place passage on 31 July 2026 but report further floor stages on 2–3 August 2026; no gazette date or Act number has been published, so the date given here is the date of passage, not of gazettal.
25. Ministry of Finance, *Annual Report on the Management of the Energy Sector Levies and Accounts for the Year 2016*. The collection and lodgment mechanism described here is unchanged in later editions. <https://mofep.gov.gh/sites/default/files/reports/economic/Annual%20Report%20on%20the%20management%20of%20Energy%20sector%20levies.pdf>
26. Energy Sector Levies Act, 2015 (Act 899), First Schedule; ESLA (Amendment) Act, 2019 (Act 997), assented 19 August 2019; Act 1135 (2025), which repealed Acts 899, 946, 997 and 1064 and restated the Road Fund Levy at GHp48 per liter. Sources differ on the pre-2015 rate: contemporary reporting gives GH¢0.07 per liter immediately before Act 899, while the Auditor-General's 2006 performance audit records the fuel levy at ¢600 per liter at the time of the audit in March 2005 (para. 24, p. 7), which converts to GH¢0.06 on redenomination. The same report records increases from ¢150 to ¢230 per liter in 2001 and from ¢230 to ¢400 in 2003 (para. 48, pp. 17–18), so at least one further adjustment occurred between 2003 and 2005. Public sources do not settle the position between redenomination in 2007 and 2015. The distinction does not affect the argument, which turns on the levy's failure to move across nineteen years rather than on its precise starting level.
27. World Bank, World Development Indicators, indicator FP.CPI.TOTL, "Consumer price index (2010 = 100)," Ghana: 278.45 (2019) and 855.78 (2025). Annual-average series, not period-end. Ghana Statistical Service reports annual average inflation of 14.6% for 2025 and 22.9% for 2024, consistent with the World Bank series; the December 2025 year-on-year point rate was

5.4%. GSS's own domestic series was rebased to 2021=100 and reports a materially lower index level; it tracks the same inflation on a different base and is not directly comparable to the 2010=100 figures used here.

28. Institute for Fiscal Studies (Ghana), *Revenue Earmarking in Ghana: Management and Performance Issues*, Occasional Paper No. 7, 23 August 2016, Table 3 (p. 17), "Annual Inflows to the Road Fund, 2000–2015," source given as Ministry of Finance without a publication reference: GH¢25.5m in 2000 and GH¢272.6m in 2015, and 5.3% and 1.0% of domestic revenue. Deflated by the World Bank consumer price index for Ghana (FP.CPI.TOTL, 2010 = 100: 19.21 in 2000, 182.64 in 2015; the series at note 27), the 2015 inflow is 1.12 times the 2000 inflow in real terms, about 0.8% a year. The series is inflows to the Fund from all sources, not the levy alone, and the levy was adjusted in 2001 and 2003 (note 26). These are the endpoints Luong and Azuma quote (note 15); they could not be located in the Ministry's 2017 Budget Statement, which that work cites for them. <https://ifsghana.org/wp-content/uploads/2017/01/Occasional-Paper-No.-7-Revenue-Earmarking-in-Ghana-Management-and-Performance-Issues.pdf>
29. Ministry of Finance, *Annual Report on the Management of the Energy Sector Levies and Accounts for the Year 2019*. https://mofep.gov.gh/sites/default/files/reports/economic/2019_Annual_ELSA_Report.pdf
30. "Road tolls abolished," Ghanaian Times, 18 November 2021. <https://ghanaianimes.com.gh/road-tolls-abolished/> Syndicated by allAfrica on 22 November 2021 at <https://allafrica.com/stories/202111220635.html>, which now blocks automated access.
31. Naa Lamiley Bentil, "Road toll reintroduction: Solution or burden?", Graphic Online, 7 April 2025. <https://www.graphic.com.gh/features/opinion/ghana-news-road-toll-reintroduction-solution-or-burden.html>
32. "Reintroduction of road and bridge tolls; Parliament approves 20-year Private Partnership," GBC Ghana Online, 2026. <https://www.gbcbghanaonline.com/news/road-and-bridge-tolls/2026/>
33. Ministry of Finance, *Annual Report on the Management of Energy Sector Levies*, 2016 and 2019 editions. 2016 edition: <https://mofep.gov.gh/sites/default/files/reports/economic/Annual%20Report%20on%20the%20management%20of%20Energy%20sector%20levies.pdf> ; 2019 edition: https://mofep.gov.gh/sites/default/files/reports/economic/2019_Annual_ELSA_Report.pdf
34. MoRH, *2025 PBB Estimates*, appropriation summary and 2024 expenditure performance tables. The 2024 ministry total of GH¢4,613,561,786 and the Road Fund approved allocation of GH¢1,192,715,344 are listed as separate rows.
35. Act 1147, ss.30(1), 55.
36. Act 1147, s.30(2).
37. MoRH, *2025 PBB Estimates*, §6 Expenditure Trends and Financial Performance for 2024. The current-year figure is derived: GH¢1,192,715,344 approved less GH¢448,825,900 loan repayment.
38. Ibid., Sub-Programme Results Statements SP3.1 and SP3.2.
39. "Parliament approves GH¢3.6bn for Road Maintenance Trust Fund," Ghanaian Times, August 2026. <https://ghanaianimes.com.gh/parliament-approves-gh%20A23-6bn-for-road-maintenance-trust-fund/>
40. "Agbodza pushes back on Dodo Pepesu-Nkwanta road cost allegations," News Ghana, March 2026. The original now blocks automated access; archived copy: <https://web.archive.org/web/20260423004739/https://www.newsghana.com.gh/agbodza-pushes-back-on-dodo-pepesu-nkwanta-road-cost-allegations/>
41. Ibid., reporting an investigation by The Fourth Estate. Approvals given for these awards could not be established from public sources.
42. Public Procurement Board, *Standard Tender Document for Procurement of Works — Medium Contracts (Admeasurement)*, October 2003, Conditions of Contract cl. 43.1 (p. 61): payment within 28 days of each certificate, and "If the Employer makes a late payment, the Contractor shall be paid interest on the late payment in the next payment," at the prevailing rate for commercial borrowing. <https://ppa.gov.gh/wp-content/uploads/2019/01/Standard-Tender-Document-for-Procurement-of-Works-Medium-Contracts-Admeasurement.pdf> — *Smaller Contracts (Small Value, Short Duration and Low Risk)*, October 2003, FIDIC Short Form conditions, "Delayed Payment," numbered 11.10 in the body and 11.8 in the contents and appendix (p. 41): "The Contractor shall be entitled to interest at the rate stated in the Appendix." <https://ppa.gov.gh/wp-content/uploads/2019/01/Standard-Tender-Document-for-Procurement-of-Works-Smaller-Contracts.pdf> — Public Procurement Authority, *Standard Request for Quotation Documents for Procurement of Works (Minor Works)*, undated, cl. 11.8 (p. 36): "The Contractor shall be entitled to compound interest at the selling rate for Construction by the Bank of Ghana." <https://ppa.gov.gh/wp-content/uploads/2023/04/STD-Procurement-for-Works-Minor-Works.pdf> — *Standard Tender Documents for the Procurement of Works*, Medium Contracts and Major Contracts, December 2019, based on the FIDIC MDB Harmonised Edition (2010), sub-clause 14.8 (pp. 139–140 and 134–135 respectively): financing charges compounded monthly, at three percentage points above the central bank's discount rate unless the Particular Conditions provide otherwise. <https://ppa.gov.gh/wp-content/uploads/2020/05/Procurement-of-Works-Medium-Contracts-2020.pdf> ; <https://ppa.gov.gh/wp-content/uploads/2020/05/Procurement-of-Works-Major-Contracts-2020.pdf> — Deadlines, rates and compounding terms differ between the forms; the entitlement exists in each.
43. Auditor-General, *Performance Audit Report of the Auditor-General on Selected Road Works in Ghana: (1) Tetteh Quarshie to Madina Road, (2) Ayamfuri to New Obuase Road, and (3) the Bolgatanga, Bawku to Polimakom Road* (Daniel Yaw Domelevo, Auditor-General), 28 November 2019, ref. AG.01/102/Vol.2/132. The introduction records "delayed payments contributing to cost overruns because of fluctuations and in many cases interest on delayed payments." On Tetteh Quarshie–Madina: the

contractual entitlement under sub-clause 60.8, payment within 56 days and thereafter monthly compounding at the Bank of Ghana prime rate plus 2% on the cedi component, para. 134 (p. 52); delayed payment among the causes of cost increase, para. 136 (pp. 52–53); the payment-delay analysis of 103 certificates and the interest claims, paras. 140–141 (p. 55) — the audit states the claims as 23% and 11% of project cost, but against the final cost in its own Table 26 they are 11.1% and 1.1%, and the percentages are not used here; interest within the final contract sum, Table 26 (p. 97). A companion report of the same date, ref. AG.01/102/Vol.2/131, on the East Legon–Spintex underpass, Eastern Corridor lots 5 and 6 and the Oil and Gas Enclave roads, records the same at paras. 164 and 195. An earlier version of this memo cited a secondary summary of these audits.

https://audit.gov.gh/files/audit_reports/Performance_Audit_Report_of_the_Auditor_On_%281%29_Tetteh_Quarshie_To_Madina_Road%3B_%282%29_Ayamfuri_to_New_Obuase_Road%3B_and_%283%29_The_Bolgatanga%2C_Bawku_to_Polimakom_Road.pdf; companion: https://audit.gov.gh/files/audit_reports/Performance_Audit_Report_of_the_Auditor-General_on_Selected_Road_Works_in_Ghana-1.pdf

44. Ghana Highway Authority, "Roads Minister, Hon. Kwame Govers Agbodza, announces several road projects to be constructed and rehabilitated under Government's flagship 'Big Push' initiative," 7 April 2025, reporting the Minister's inspection tour of 2–4 April 2025. https://www.highways.gov.gh/blog_post/43/roads-minister-hon-kwame-govers-agbodza-announces-several-road-projects-to-be-constructed-and-rehabilitated-under-governments-flagship-big-push-initiative
45. African Development Bank, Independent Development Evaluation, "IDEV evaluation examines the development impact of AfDB's flagship road project in Ghana," 25 October 2021, summarising a 2019 evaluation of the Fufulso–Sawla Road Project (147.5 km; US\$156m African Development Fund grant; completed 2015): part of the road had degraded, and poor maintenance threatened the sustainability of its benefits. <https://idev.afdb.org/index.php/en/news/idev-evaluation-examines-development-impact-afdb's-flagship-road-project-ghana> — Emmanuel K. Dogbevi, "Current state of the \$166m Fufulso–Sawla road and integrated projects," Ghana Business News, 17 January 2022, reporting potholes and damage on portions of the road inaugurated in August 2015; the US\$166m figure is an estimate for the integrated project, not the grant. <https://www.ghanabusinessnews.com/2022/01/17/current-state-of-the-166m-fufulso-sawla-road-and-integrated-projects/> — Luong and Azuma (note 15) describe the road as "dilapidated" six years after opening, without a source; the narrower statement above is what the record supports. The Bank's December 2017 project completion report could not be retrieved.
46. "Broken roads, broken promises," Graphic Online, 22 May 2025. <https://www.graphic.com.gh/features/opinion/ghana-news-broken-roads-broken-promises-how-delayed-payments-to-contractors-undermine-ghanas-progress.html>
47. Agbodza, remarks at the inauguration of the RMTF Board of Trustees, 9 December 2025, as reported in Graphic Online, 11 December 2025 (see note 21).
48. Agbodza, remarks during the President's inspection of the Navrongo–Chuchuliga–Tumu road, reported in "Gov't disburses GH¢23.1bn to clear road contractors' arrears – Roads Minister," MyJoyOnline, August 2026. <https://www.myjoyonline.com/govt-disburses-gh%C2%A23-1bn-to-clear-road-contractors-arrears-roads-minister/>
49. MoRH, 2025 PBB Estimates, project status listings.
50. Ministry of Finance, *Budget Statement and Economic Policy for 2025*, para. 98, which states that cocoa roads "account for about 66.8 percent of total Cocobod debt." https://mofep.gov.gh/sites/default/files/budget-statements/2025-Budget-Statement-and-Economic-Policy_v5.pdf
51. Afrobarometer and CDD-Ghana, *Summary of Results: Afrobarometer Round 8 Survey in Ghana, 2019* (2,400 respondents, 16 September–3 October 2019), Q48PT1 (p. 12): "Infrastructure / roads" 26.0%, unemployment 18.3%. https://www.afrobarometer.org/wp-content/uploads/2022/02/afrobarometer_sor_gha_r8_en_2020-02-09.pdf — CDD-Ghana, "Infrastructure/roads Ghanaians' most important problem, new Afrobarometer study shows," press release, 20 November 2019: 59% name it among up to three problems, against 39% for unemployment, the first time the category has led since 2002. https://www.afrobarometer.org/wp-content/uploads/2022/02/ab_r7_pr_most_important_problems_20112019.pdf — The question asks which problems government should address; it does not distinguish construction from maintenance.
52. Isaac Sakyi Damoah and Desmond Kwadjo Kumi, "Causes of government construction projects failure in an emerging economy: Evidence from Ghana," *International Journal of Managing Projects in Business* 11(3), 2018, pp. 558–582, §§6.1.1–6.1.2. Interview-based, on government construction projects generally. <https://doi.org/10.1108/IJMPB-04-2017-0042>
53. "Big Push: Here's how much we're paying for every kilometre of road," The Fourth Estate, 27 March 2026, reporting per-kilometre awards from approximately GH¢25m/km (Atimpoku–Asikuma Junction) to approximately GH¢154.4m/km (a dualisation contract). <https://thefourthestategh.com/2026/03/big-push-heres-how-much-were-paying-for-every-kilometre-of-road/>
54. Adoption of the Committee of the Whole's report, reported in "Parliament approves GH¢3.6bn for Road Maintenance Trust Fund," Ghanaian Times, August 2026 (same source as note 39). The article names the Committee of the Whole as the adopting body, but does not identify which sector committee, if any, originated the report. <https://ghanaiantimes.com.gh/parliament-approves-gh%C2%A23-6bn-for-road-maintenance-trust-fund/>
55. "GRA confirms July 16 start date for revised energy sector levies," Graphic Online, 2 July 2025. <https://www.graphic.com.gh/news/general-news/gra-confirms-july-16-start-date-for-revised-energy-sector-levies.html>; Energy Sector Levies (Amendment) Act, 2025 (Act 1141). That article establishes the rate change, its effective date and the product-by-product treatment only. On passage under a certificate of urgency on 3 June 2025: "Parliament passes new energy sector levy under certificate of urgency," Ghana News Agency, 4 June 2025. <https://gna.org.gh/2025/06/parliament->

passes-new-energy-sector-levy-under-certificate-of-urgency/ On transport-operator opposition: "GPRTU threatens nationwide strike over GHC1 fuel levy," Citi Newsroom, June 2025. <https://citinewsroom.com/2025/06/gprt-t-threatens-nationwide-strike-over-ghc1-fuel-levy/> — the union withdrew its objection the following month. On the GH¢8.81bn first-year yield: annual report on the levy presented to Parliament on 23 June 2026 by the Minister for Finance, reported at <https://www.modernghana.com/news/1505014/energy-levy-generated-gh881billion-in-2025gov.html>

56. World Bank, *Implementation Status & Results Report*, Transport Sector Improvement Project, February 2024. <https://documents1.worldbank.org/curated/en/099021124080510552/pdf/P15102612dbb730921be6c189d0eafc0235.pdf> ; MoRH, *2025 PBB Estimates*, Summary of Key Achievements in 2024.
57. Public Financial Management Act, 2016 (Act 921), ss.25(4), 25(6), 25(7), 25(8), 33(1) and 33(4). <https://www.mofep.gov.gh/sites/default/files/acts/PUBLIC-FINANCIAL-MANAGEMENT-ACT-2016.pdf>
58. Auditor-General, *Performance Audit Report of the Auditor-General on the Funding of the Ghana Road Fund* (Edward Dua Agyeman, Auditor-General), transmitted to the Speaker of Parliament 3 July 2006, Ref. AG.01/109. The ninth performance audit report issued under article 187(5) of the 1992 Constitution and section 13(e) of the Audit Service Act, 2000 (Act 584); the audit covers 2000–2004, with fieldwork to March 2005. Printed by The Advent Press. Published by the Ghana Audit Service at https://audit.gov.gh/files/audit_reports/Performance_Audit_Report_of_the_Auditor-General_on_the_funding_of_Ghana_Road_Fund.pdf ; page and paragraph references are to the report's own printed numbering. Annex figures in this section are drawn from that report as follows: the statement of the mechanism, §3.1, para. 40 (p. 14); the 2000–2004 revenue and maintenance-expenditure summary and the observation on controlled budgeting, Table 1 and paras. 40–41 (pp. 14–15); the October 2003 coverage statement by the Director of the Road Fund, para. 37 (p. 13); the per-billion-cedi output series, paras. 42–46 with Figures 3 and 4 (pp. 15–16) and Appendix A; the conclusion on over-dependence on the fuel levy, para. 81 (p. 28); the tolling proposals of April 2001 and November 2003 and the Ministry's legal section confirming them ready but on hold, paras. 63–68 (pp. 22–24), restated as a recommendation at para. 92 (p. 33); and the exclusion of road maintenance from the audit's scope, para. 7 (p. 3). One internal discrepancy: Table 1 gives the five-year deficit as ₵127.82bn while the accompanying text at para. 41 gives ₵127.87bn. This memo uses the table figure.
59. World Bank, *Implementation Completion Report on a Credit to the Republic of Ghana for a Highway Sector Investment Program* (Credit IDA-28580), Report No. 24248, 21 June 2002. <https://documents1.worldbank.org/curated/en/557961468249626582/pdf/multi0page.pdf>
60. World Bank, *Implementation Completion Report, Republic of Ghana: Second Transport Rehabilitation Project* (Credit 2192-GH), Report No. 18413, 18 September 1998. <https://documents1.worldbank.org/curated/en/572901468251418215/pdf/multi-page.pdf>