

Evaluating The Impact of Night Public Service Passenger Transport Ban on the Performance of Transport Business in Lusaka, 2021 -2025

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Abstract

This study evaluated the impact of the Night Public Service Passenger Transport Ban on the performance of transport businesses in Lusaka, Zambia. Specifically, the study examined effect on operational performance, financial performance, and employment and staffing dynamics. An explanatory parallel mixed method design was adopted, with a sample size of 341 transport operators targeted using structured questionnaires, interviews and Focus Group Discussions (FGDs). The questionnaire received an overwhelming return rate of 100%. Data saturation principle for KII was arrived at through 12 interviewees. Descriptive statistics, inferential statistics and thematic analysis was employed to assess the extent of the ban's effects across key performance indicators while purposive and stratified sampling were used as sampling techniques. The findings indicate significant operational disruptions, with 67.5% of respondents agreeing and/or strongly agreeing that operating hours were reduced, 64.8% reporting decreased trip frequency and 70.5% indicated reduced vehicle utilization. In addition, 62% confirmed intensified peak-hour congestion due to compressed operating windows. Financial performance was substantially affected, as 71.8% reported reduced daily revenue, 70.4% experienced declining profit margins, and 71.5% indicated increased operating costs. Furthermore, 69.8% reported difficulty meeting financial obligations, while 72.7% expressed concerns about long-term business sustainability. Employment outcomes also reflected notable strain, with 71.5% indicating reduced driver working hours and 71.8% reporting income reductions for workers. Approximately 64.2% confirmed job losses or staff reductions, and 70.9% observed declining staff morale. These statistical findings were buttressed by the qualitative findings in triangulation. The study concludes that while the ban may have pursued safety objectives, it has generated significant operational inefficiencies, financial instability, and labor market disruptions within Lusaka's transport sector. The study recommends that the government, through RTSA, should introduce a regulated night transport permit system that allows compliant operators who meet strict safety standards. Furthermore, regulatory authorities should strengthen targeted safety enforcement measures, and the use of digital vehicle monitoring systems such as speed governors and GPS tracking, instead of relying mainly on blanket operational bans. Finally, policymakers and transport associations should develop supportive labour policies such as structured shift systems, driver capacity-building programs, financial literacy training, and social protection schemes to protect employment and improve the resilience of transport workers affected by reduced operating hours.

Keywords: Night transport ban, Operational Performance, Financial Performance, Employment Effects, Public Service Passenger Transport

1. Background

Public service transport operations play an indispensable role in facilitating economic activity, social mobility, and the overall functioning of urban and national economies. Globally, transport systems enable the movement of goods, labour, support business productivity, and stimulate trade by linking producers to markets and workers to employment opportunities. Effective and Efficient public transport reduces transaction costs, enhances business competitiveness, and contributes to national GDP through improved mobility and reduced delays in the flow of goods and services (World Bank, 2023). Urban economies, in particular, rely heavily on predictable and continuous transportation networks, including during evening and night hours, to sustain commercial services, manufacturing shifts, hospitality operations, emergency workforces, and essential logistics (United Nations Human Settlements Programme [UN-Habitat], 2022). Where restrictions are imposed, especially on night travel, evidence shows that cities experience productivity losses, reduced firm operating hours, and increased operational costs for workers and businesses (OECD, 2021; Gwachamba & Chikozho, 2023).

Across the African continent, public transport is the backbone of urban economic participation, with more than 70% of commuters depending on minibuses, buses, taxis, and other semi-formal transport systems to access employment, markets, and services (African Development Bank, 2022). Transport interruptions or regulatory constraints, including curfews or time-of-day bans, often lead to heightened commuting costs, reduced working hours for businesses, and increased informal transportation alternatives that operate with minimal regulation and higher safety risks (Kassa, 2021). Studies conducted in East and Southern Africa demonstrate that night-time transport restrictions negatively impact small and medium operators by reducing daily passenger volumes, increasing per-kilometer operating costs, and forcing some operators to shorten routes or temporarily withdraw vehicles from service (Moyo & Nkondo, 2022; Turok & Visagie, 2023). These disruptions have wider macroeconomic implications, as reduced mobility constrains labour market participation and restricts the growth of the urban informal economy, which constitutes a major share of employment in most African cities.

Within the Southern African Development Community (SADC), countries such as South Africa, Zimbabwe, and Tanzania have documented that transport operating-hour restrictions introduced for crime prevention or public safety purposes often have unintended economic costs, including increased travel times, reduced availability of affordable late-night mobility options, and loss of revenue for operators (Chigudu, 2021; South Africa National Treasury, 2022). Such findings underscore the sensitivity of urban mobility to regulatory interventions, especially in contexts where transport businesses operate on narrow profit margins and rely heavily on high-volume daily passenger turnover.

Zambia reflects these regional patterns. Urban centres such as Lusaka depend on extensive public service transport networks to sustain business activity, particularly in the high-density informal commercial economy that relies on long trading hours and flexible mobility (Zambia Institute for Policy Analysis and Research [ZIPAR], 2023). Public service vehicles provide essential connectivity for thousands of workers in retail, hospitality, health services, and informal trade who work beyond regular daytime hours. As such, limitations on transport availability can impede labour supply, restrict access to markets, and raise operational costs for businesses reliant on shift-based labour.

Despite the economic centrality of public transport, scholarly engagement with the specific effects of night-time transport bans remains thin, with most literature focusing on road safety, congestion, or public order rather than the economic performance of transport operators themselves. Against this backdrop, the present study seeks to evaluate the impact of the Night Public Service Transport Ban on the performance of transport businesses in Lusaka, addressing a critical empirical gap and contributing evidence to public policy debates on mobility regulation, business sustainability, and urban economic resilience.

The liberalization of Zambia's transport sector in the early 1990s marked one of the most significant structural reforms undertaken in the country's shift from a state-led to a market-oriented economy. Under President Frederick Chiluba's administration (1991–2001), sweeping economic reforms were introduced to dismantle the state monopolies inherited from the United National Independence Party (UNIP) era and promote private-sector participation across key industries (Rakner, 2022). The transport sector, which had long been dominated by the state-owned United Bus Company of Zambia (UBZ), became a central focus of these reforms. UBZ had been the primary provider of long-distance and inter-city public bus services since the post-independence period, but by the late 1980s it was facing financial distress, ageing fleets, managerial inefficiencies, and persistent operational losses (Phiri, 2020; Ministry of Transport and Communications, 2019). These challenges created the impetus for liberalization, as the monopoly structure was increasingly unable to meet the growing mobility needs of a rapidly urbanizing population.

The Chiluba government moved decisively to liberalise the sector through deregulation policies aligned with the broader Structural Adjustment Programme (SAP) supported by the International Monetary Fund and the World Bank. As part of these reforms, restrictions on private companies and individuals entering the passenger transport market were lifted beginning in 1991, allowing minibuses, private buses, taxis, and cooperatives to operate commercially for the first time in decades (World Bank, 1996; Situmbeko & Zulu, 2021). The liberalization process encouraged competition, expanded service availability, and introduced market pricing mechanisms that replaced the previously centralized fare-setting system under UBZ. This shift transformed the mobility landscape in urban centres such as Lusaka and Copperbelt towns, where private operators rapidly filled service gaps left by the declining performance of UBZ. Scholars observe that by the mid-1990s, private minibuses had become the dominant mode of urban transport, fundamentally altering the structure, efficiency, and culture of public transportation in Zambia (Tukumbi, 2023).

The decline and eventual dissolution of UBZ was a direct consequence of both internal financial failures and external competitive pressures that emerged after liberalisation. Following years of mismanagement, mounting debt, and insufficient reinvestment in fleet renewal, UBZ struggled to compete with smaller, more flexible private operators who could respond quickly to passenger demand and operate on routes previously unavailable under the regulated system (Phiri, 2020). By 1998, the company was fully liquidated, and its assets were auctioned, effectively ending the era of state-monopolised bus transportation (Ministry of Transport and Communications, 2019). The vacuum left by UBZ's exit accelerated the proliferation of privately owned minibuses and buses, leading to what some analysts describe as the "informalisation of urban transport," characterised by fragmented ownership, variable service standards, and limited regulatory compliance (Abraham & Mwansa, 2021). While the shift improved availability and accessibility of transport services, it also introduced new challenges related to safety, congestion, competition for passengers, and inconsistent service quality.

Liberalization under Chiluba ultimately reshaped Zambia's transport sector into a highly decentralized and competitive market. The emergence of private operators brought efficiency and flexibility, but it also placed significant demands on

regulatory institutions to manage a rapidly expanding and heterogeneous fleet. The long-term consequences of these reforms continue to shape Zambia's transport policy landscape, including contemporary debates on regulation, enforcement, safety measures, and operational standards for public service vehicles (ZIPAR, 2023). Understanding this historical transformation is therefore essential for analyzing current transport sector policies—including operating-hour restrictions—because many of the tensions observed today stem from the liberalized structure that emerged in the 1990s.

In later years, the governance of public service transport in Zambia has evolved through various statutory and administrative reforms aimed at ensuring safety, efficiency, and public order. The introduction of night-time operating restrictions represents one of the most significant interventions affecting transport business operations in recent years. The Night Public Service Transport Ban—which restricts the movement of public service vehicles during specified late-night hours—was first formalized through Statutory Instrument No. 76 of 2016, issued under the Road Traffic Act, which imposed conditions on operating hours for certain categories of public service vehicles. The regulation was later reinforced through Statutory Instrument No. 51 of 2021, which extended the restrictions and clarified enforcement mechanisms, citing concerns relating to road safety, increasing night-time road traffic accidents, and criminal activity associated with late-night public transport operations.

These statutory instruments were enacted in response to growing national concern regarding high rates of road traffic accidents involving public service vehicles, many of which occurred during night-time hours. According to the Road Transport and Safety Agency (RTSA, 2022), Zambia recorded more than 30,000 road traffic accidents annually between 2018 and 2021, with an increasing proportion occurring after 22:00 hours. Night-time visibility challenges, fatigue among drivers, and inadequate policing of drink-driving laws were among the contributing factors cited in policy discussions leading up to the 2021 update of the SI. Lusaka, being the most populous urban centre and the busiest transport hub, accounted for a disproportionately high share of these incidents (RTSA, 2023).

Beyond accident prevention, policymakers also referenced concerns related to security. Zambia Police annual reports between 2019 and 2021 indicated increases in night-time criminal incidents involving public transport passengers, including robberies and assaults (Zambia Police Service, 2021). These safety concerns contributed to the rationale for enforcing a more stringent night public transport ban in urban areas.

While the safety justification is well-documented, the economic implications for transport businesses remain under-examined. The public transport sector in Lusaka consists largely of small-scale operators, many of whom function within associations or cooperatives. These operators rely heavily on extended operating hours to meet revenue targets because daily income is closely tied to passenger volumes, fuel prices, route distance, and the number of completed trips per day (ZIPAR, 2023). Restricting operations to daytime hours reduces available working time by approximately 6–8 hours depending on route classification. Preliminary industry estimates suggest that operators may lose between 20% and 35% of potential daily revenue due to night-time restrictions, although these figures lack formal empirical verification and vary considerably by route and operator size (Lusaka Transport Operators Association, 2022).

Existing scholarly literature in Zambia has predominantly focused on road safety policy (Mulenga & Kaluba, 2020), informal transport governance (Abraham & Mwansa, 2021), and the socio-economic role of minibuses (Chikonde & Banda, 2022). However, very few studies have analysed how time-specific regulatory bans influence business performance outcomes such as profitability, employment levels, service frequency, and operational sustainability. International comparative studies highlight that such bans often lead to increased informal transport activity as passengers seek alternatives, reduced operational hours for businesses dependent on shift work, and employment losses among drivers and conductors (Moyo & Nkondo, 2022; Turok & Visagie, 2023). Yet these findings have not been validated in the Zambian context, where the structure of the transport market and the level of enforcement differ.

The background, therefore, reveals both the necessity and the timeliness of examining how the night transport ban affects transport business performance in Lusaka. As Zambia continues to urbanize rapidly, Lusaka's population exceeds 3 million and grows at approximately 4% annually (Central Statistical Office, 2023), the balance between safety regulation and economic mobility becomes increasingly critical. Understanding the unintended economic effects of the ban is therefore essential for designing transport policies that are both safe and economically sustainable.

1.2 Statement of the Problem

Although the Night Public Service Transport Ban introduced through Statutory Instrument No. 76 of 2016 and reinforced by Statutory Instrument No. 51 of 2021 was implemented with legitimate safety and security intentions, its impact on the performance of transport businesses in Lusaka remains inadequately understood. Public transport operators in Lusaka rely on long operational hours to generate sufficient daily revenue, particularly because most operate on tight margins with high fuel costs, fluctuating passenger demand, and rising vehicle maintenance expenses (ZIPAR, 2023). By restricting operations during late-night hours, traditionally a period of active mobility for workers in hospitality, security, health services, and informal markets, the ban may have resulted in reduced trip frequency, lower passenger volumes, and a contraction in daily revenue among operators, whose net effect might be reduced profits, operational hours, business viability and sustainability, employment of drivers / transport officers, among others.

Preliminary anecdotal reports from transport associations suggest that some operators experienced income losses of up to 30%, particularly on peri-urban routes where evening travel is common for workers returning from the central business district (Lusaka Transport Operators Association, 2022). There are also indications that the ban has contributed to reduced employment opportunities for drivers and conductors, many of whom previously relied on night shifts to supplement their

income. Additionally, some businesses that depend on late-night mobility—such as restaurants, markets, and security firms—have reported difficulties retaining staff due to limited transport availability after operating hours (Daily Nation, 2023). These effects signal broader economic consequences that extend beyond the transport sector itself.

Despite these concerns, there is limited empirical research quantifying the effect of the ban on firm-level performance indicators such as revenue, operational hours, profit margins, vehicle utilisation rates, staffing levels, and customer demand. Most studies examining transport regulation in Zambia and the wider African region have focused primarily on road safety outcomes, accident reduction, and regulatory compliance, rather than the financial or operational impacts on transport businesses. For instance, Mulenga and Kaluba (2020) analysed the effectiveness of RTSA safety enforcement measures but did not assess firm-level economic implications. Similarly, Chikonde and Banda (2022) explored commuter safety perceptions in Lusaka’s public transport system, highlighting accident risk but offering no analysis of revenue or operational hours. In another study, Abraham and Mwansa (2021) examined the governance of informal transport operators, noting regulatory challenges but not investigating performance indicators such as profitability or staff retention.

The absence of evidence poses a significant risk to policymaking. Leaving the phenomenon unexamined may lead to policy decisions that disproportionately harm small and medium transport operators, reduce mobility for low-income workers, increase reliance on unregulated transport alternatives, and constrain Lusaka’s urban economic productivity at night. This study, therefore, seeks to fill this gap by evaluating the impact of the Night Public Service Transport Ban on the performance of transport businesses in Lusaka. It will focus on key variables including revenue, passenger volumes, operational hours, vehicle utilization, and employment outcomes. By addressing this gap, the study will contribute to informed transport policy design, improved business sustainability strategies for operators, and enhanced understanding of the economic implications of regulatory interventions in Zambia’s transport sector.

2. Literature Review

2.1 Previous Studies

Rodrigue & Notteboom, (2020), one of the main sectors that is driving economic development is transportation, because it serves as the backbone of trade, commerce, and social mobility. Today, the more advanced economies require integrated transportation systems in order to ensure smooth movement of goods, people, and information; this means higher productivity with lower costs. Time changes have witnessed improvements in transportation, including railroads in the Industrial Revolution and container shipping in the 20th century, making economies more efficient and connected. According to World Bank, (2020), improving transportation infrastructure systems can improve access to critical resources, labor markets, and other economic opportunities. For example, in India, productivity of agriculture increased as high as 50% in regions that benefited from the improvement brought about by PMGSY, which enhanced rural connectivity through roads. This is one of the best examples of transport systems that can change the face of regional economic development and poverty alleviation (World Bank, 2020). Transportation industry unites various modes of transport, such as roads, rail, maritime, and air transport, which reduces the logistics and general supply chain cost. The World Bank estimated that an annual GDP growth rate of 1.5% more than a nation with poor-developed transport infrastructure is witnessed in a country boasting high-efficient logistics systems. This reveals the economic gains of smoothing transport and logistics structures (Commission, 2020).

Increased connectivity is a source of strengthening trade, cultural interaction, and the flow of knowledge in various regions. One clear example would be the African Continental Free Trade Area, which projects an increase of approximately 52% of intra-Africa trade based on enhanced transport linkages along with regional integration endeavours. Besides enhancing the economic tie, it has positive contributions toward medium to long-run social-economic growth of participating countries (World Bank, 2019)

A robust body of theory and empirical work underpins the relationship between transport regulation and business performance. The Regulatory Impact literature emphasizes that regulations have distributional effects—compliance costs, market distortions, and heterogeneous firm responses depending on scale and formality (Hood, 1991; Baldwin et al., 2012). Transport Economics provides the microeconomic mechanism that links supply constraints (e.g., restricted hours) to demand elasticity, fare responses and utilisation dynamics (Meyer, Kain & Wohl, 1965; Small & Verhoef, 2007). Labour-oriented theories such as Efficiency Wage and labour market adjustment literature explain how changes in firm output translate into labour outcomes (Shapiro & Stiglitz, 1984; Akerlof & Yellen, 1986).

Institutional and empirical syntheses confirm these conceptual linkages. Global reports by UITP and the World Bank show that mobility restrictions (including those during the COVID-19 pandemic) led to large declines in ridership and vehicle kilometers, reduced revenue for operators, and rapid adjustments in service frequency (UITP, 2021; World Bank, 2021). In sub-Saharan Africa, the African Development Bank and UNECA have documented that informal and semi-formal operator dominate urban mobility, and that these operators exhibit high sensitivity to demand shocks because of small scale, cash-based operations, and weak access to credit (AfDB, 2022; UNECA, 2020). For Zambia, national institutions (RTSA; ZIPAR) and transport stakeholder reports emphasize road safety and regulatory enforcement as policy priorities, but published evaluations of the economic impacts of operating-hour restrictions are scarce (RTSA, 2022; ZIPAR, 2023). Taken together, the general literature frames a plausible causal chain: regulatory restriction leading to reduced operating hours then lower utilization and revenue and finally labour impacts and possible market exit but also shows the empirical challenge of measuring these steps in liberalized, informally dominated markets.

2.2 Operational Performance

Multiple empirical strands document that supply restrictions and enforcement actions reduce trip frequency and vehicle utilization. Global evidence from pandemic mobility studies shows large, rapid declines in public transport use and fleet deployment (World Bank, 2021; UITP, 2021). These analyses typically use automated counts, card-tap data, or mobile phone mobility proxies to quantify declines in vehicle kilometers and service frequency (Gkiotsalitis & Cats, 2021; Jenelius & Cebecauer, 2020). Although these studies are strong methodologically (large administrative datasets, time-series analysis), they largely concern formal transit systems rather than informal minibuses and taxis.

Regional African studies provide more contextualized findings. Turok and Visagie (2023) found that curfew and restricted-hours policies in South African cities produced measurable reductions in night-time services and caused operators to consolidate routes. Behrens et al. (2019) documented how Johannesburg's minibus taxi sector adjusts frequency and vehicle deployment in response to demand shocks and enforcement actions. In East Africa, Gwachamba and Chikozho (2023) used route observations and operator interviews to show that enforcement campaigns reduced night services on peripheral routes while central routes remained relatively better served.

Zambian evidence is more limited but indicative. ZIPAR (2023) and RTSA (2022) report declines in night-time movements in urban centers during periods of heightened enforcement, though these reports rely primarily on aggregated crash and mobility indicators rather than firm-level utilization data. Mulenga and Kaluba (2020) examined RTSA enforcement outcomes and noted operational adjustments by operators following stricter hour regulations, but their study was descriptive and did not use longitudinal operator panels. Association reports (e.g., Lusaka Transport Operators Association, 2022) have circulated estimates of reduced trip frequencies on evening routes; however, these are usually cross-sectional and self-reported, limiting causal inference.

Suffice to say, the strongest studies employ administrative or automated ridership data with time-series designs; however, such data are rarely available for informal fleets. Many African studies therefore rely on qualitative interviews, cross-section surveys, or association estimates that are vulnerable to selection and recall biases. For Lusaka specifically, the literature lacks representative, longitudinal, firm-level measures of trip frequency and vehicle utilisation before and after statutory changes (SI 76/2016 and SI 51/2021), which inhibits precise measurement of operational impacts.

2.3 Financial Performance

Research on the financial impacts of mobility restrictions points to substantial revenue losses for operators worldwide, but systematic firm-level accounting evidence in African contexts is sparse. Internationally, the UITP and World Bank analyses of COVID-19 impacts quantified revenue shortfalls for urban transit operators and estimated required fiscal support to sustain services (UITP, 2021; World Bank, 2021). These studies are rigorous but focus mostly on formal agencies with accessible balance-sheet data.

Africa-focused economic studies of informal transport highlight operator vulnerability. Behrens et al. (2019) and Kassa (2021) show that minibus and taxi operators operate on thin margins and that revenue shocks quickly translate into operational distress. Moyo and Nkondo (2022) report operator income declines after curfews in Zimbabwe, and Turok and Visagie (2023) find similar patterns in South Africa. NGO and industry surveys (e.g., regional operator association reports) commonly estimate daily income declines in the range of 15–40% following severe mobility restrictions, though methodological transparency is often limited.

Zambian specific sources are largely policy reports and grey literature. ZIPAR (2023) discusses the financial fragility of small transport operators and signals revenue losses associated with reduced night operations, while RTSA (2022) provides sectoral statistics on passenger flows and accident outcomes but stops short of publishing systematic operator financial panels. Mulenga and Kaluba (2020) and Chikonde & Banda (2022) touch on financial pressures in passing, but no peer-reviewed Zambian study has comprehensively quantified profit-margin changes post-ban.

Critically, financial impact studies suffer from data limitations (absence of audited accounts for many operators), omitted confounding factors (fuel price volatility, inflation, fare changes), and limited counterfactual designs. The literature rarely disaggregates impacts by operator type or route profitability, which matters because profit margins and fixed cost burdens vary substantially across taxis, minibuses and small bus firms. For Lusaka, robust financial estimation will therefore require carefully designed proxies (trip counts \times average fare, fuel expenditures, fixed cost allocations) and analytical approaches (difference-in-differences, fixed effects) to separate ban effects from contemporaneous economic shocks.

2.4 Employment Outcomes

Empirical studies indicate that transport sector shocks rapidly affect employment conditions, particularly in informalised labour markets. Pandemic-era research using household and worker surveys documents reductions in hours worked, income volatility, and increased precarity among transport workers (ILO, 2020; World Bank social protection briefs). In African cities, qualitative and survey studies show that drivers and conductors typically experience income drops through fewer shifts and smaller passenger takings rather than formal layoffs, and that many adopt coping strategies such as secondary informal work or route switching (Agyemang, 2021; Mutapic, 2022).

Country case studies provide illustrative evidence. Moyo and Nkondo (2022) report driver income reductions and consolidation of staff in Zimbabwe following curfews. Turok and Visagie (2023) and Behrens et al. (2019) both document that labour effects often differ by operator type: larger firms can adjust through rostering, while small owner-driver models

see immediate income loss. Zambian qualitative work (Chikonde & Banda, 2022; Abraham & Mwansa, 2021) highlights the precarious labour arrangements common in Lusaka's minibuses sector and suggests that night bans may reduce driver earnings and increase turnover, but these studies stop short of longitudinal quantification.

To this extent, the employment literature is often descriptive and uses cross-sectional surveys with convenience samples. Few studies follow workers longitudinally to capture persistence, re-employment, or household coping mechanisms. Additionally, research rarely integrates firm financial stress with household labour outcomes to show transmission mechanisms. For the Lusaka case, combining operator financial proxies with worker surveys and possibly short panel tracking would produce much stronger evidence on employment effects.

2.5 Gaps in the Literature

Despite a sizable literature on mobility, safety and regulatory design, several clear empirical gaps remain, all of which are relevant to the current study. First, there is a lack of firm-level, longitudinal empirical studies that measure operational, financial, and employment indicators before and after night-time regulatory changes in African cities (ZIPAR, 2023; Behrens et al., 2019). Second, many analyses use aggregate mobility proxies (city-level ridership, mobile phone location data) which mask heterogeneity by operator type, route, and firm size; thereby limiting applicability to policy choices affecting small operators (World Bank, 2021; UITP, 2021). Third, few studies robustly control for confounders such as concurrent fuel price shocks, inflationary trends, enforcement intensity variability, and seasonal demand cycles (Kassa, 2021; African Development Bank, 2022). Fourth, the literature rarely estimates differential impacts across operator categories (minibuses vs taxis vs formal companies), yet theoretical frameworks predict substantial heterogeneity (Transport Economics literature; Behrens et al., 2019). Fifth, there is limited integration of safety benefits versus economic costs in a policy trade-off framework that would allow policymakers to weigh the gains in accident reduction or security against the losses to operator incomes and employment (OECD, 2021; Hood, 1991). Finally, Zambia-specific peer-reviewed evidence quantifying these effects is thin; most national insights stem from RTSA, ZIPAR and association reports that are not designed for causal analysis (RTSA, 2022; ZIPAR, 2023).

These gaps justify a focused, mixed-methods study in Lusaka that combines disaggregated operator data, worker surveys, route observations and robust quasi-experimental estimation to identify causal impacts and heterogeneity.

2.6 Theoretical frameworks

Regulatory Impact Theory

The proponents of this theory are Christopher Hood (1991), further expanded by Baldwin, Cave & Lodge (2012). Regulatory Impact Theory posits that government regulations, whether economic, safety-related, or administrative, produce measurable consequences (intended and unintended) on organisations, markets, and society. Regulations are assumed to impose compliance costs, alter organisational behaviour, and affect operational efficiency and profitability. The theory also assumes that regulatory effects vary across firms depending on size, structure, and operating environment. In the context of the current study, the Night Public Service Transport Ban is a regulatory intervention that restricts the operating hours of transport businesses. This theory underpins the study's examination of how the ban influences operational performance (Objective 1) by limiting hours of operation and affecting trip frequency and vehicle utilization. It also supports the analysis of financial performance (Objective 2), as regulations can reduce revenue streams while increasing fixed costs per unit of service. The theory further explains variations in impact across different operator categories (e.g., taxis vs. minibuses), helping interpret empirical differences in the data.

Transport Economics Theory

The proponents of this theory are John Meyer, John Kain & Martin Wohl (1965); later expanded by Small & Verhoef (2007). Transport Economics Theory assumes that transport systems function based on supply and demand dynamics, cost structures, pricing mechanisms, and operational efficiencies. Key assumptions include the fact that transport operators aim to maximize revenue and minimize costs; passenger demand is sensitive to availability, travel time, and service frequency, and restrictions on transport supply (e.g., time-of-day bans) directly affect demand, costs per trip, and revenue potential.

In the context of the study, the theory directly informs Objectives 1 and 2, as it explains how limiting night-time operations reduces supply hours, weakens demand availability, and increases costs per kilometer—ultimately affecting financial outcomes such as revenue, profitability, and cost structures. The theory also explains shifts in vehicle utilization, fuel consumption patterns, and route efficiency, which are key components of the operational variables under investigation. It supports the study's aim to quantify performance impacts using measurable economic indicators.

Labour Economics / Efficiency Wage Theory

The proponents of this theory are George Akerlof & Janet Yellen (1986), building on Shapiro & Stiglitz (1984). The theory holds that employers set wages and staffing structures not only based on productivity but also on operational conditions, business cycle stability, and the ability to maintain worker morale and retention. It assumes that changes in business performance affect employment decisions, shift structures, labour hours, and job security. It also assumes that reduced operational output leads to reduced labour demand.

This theory supports Objective 3, which examines the effects of the night transport ban on employment and staffing

patterns. A reduction in operating hours and revenue under the ban directly impacts the number of shifts available for drivers and conductors, job retention, and wage stability. Efficiency Wage Theory helps explain why some operators may reduce staff or hours, reassign roles, or lower incomes when business output declines. The theory also aligns with the study's aim of understanding the broader socio-economic implications of reduced night-time mobility on the transport labour force.

2.7 Conceptual Framework

The conceptual framework positions the Night Public Service Transport Ban as the primary independent variable (IV) that shapes the performance of transport businesses in Lusaka. Guided by Regulatory Impact Theory (Hood, 1991), the ban is conceptualized as a regulatory intervention that alters business operations, imposes compliance constraints, and produces measurable organisational impacts. By restricting night-time operating hours, the ban reduces the available service window for passenger transport activities, thereby influencing key operational indicators such as trip frequency, vehicle utilization, and route efficiency, as explained by Transport Economics Theory (Meyer et al., 1965), which links service supply, mobility constraints, and economic performance.

The framework further proposes that the ban affects financial performance by limiting revenue-generating hours and reducing passenger volumes while raising per-trip operating costs. Reduced income combined with relatively fixed daily costs leads to constraints on profit margins and financial sustainability, consistent with Transport Economics Theory's assumptions on cost structures, demand elasticity, and revenue cycles in transport systems.

Finally, the ban is theorized to influence employment outcomes, particularly the availability of shifts for drivers and conductors, income stability, and staff retention. This aligns with Efficiency Wage Theory (Akerlof & Yellen, 1986), which posits that organisational output and labour demand are closely linked, such that reduced business activity leads to fewer work hours, potential layoffs, and wage instability. Because transport firms rely heavily on extended operational hours to sustain employment levels, limiting night operations directly translates into reduced staffing requirements and employment insecurity.

Through these theoretical lenses, the framework illustrates the causal pathway through which the Night Public Service Transport Ban affects operational, financial, and employment performance indicators within Lusaka's transport sector.

Figure 1 below shows the Conceptual Framework of the Study:

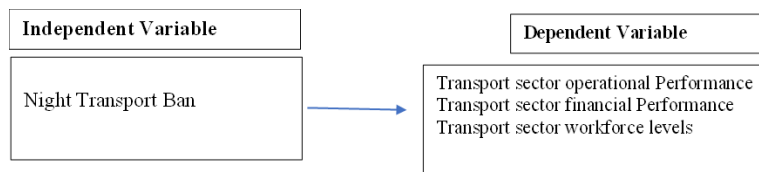


Figure 1: Conceptual Framework

3 Research Methodology and Design

The study used both deductive and inductive research approaches. The deductive approach will enable the investigation of existing theories on transport regulation and business performance, helping to test expected relationships—for example, how restrictions such as the Night Public Service Passenger Transport Ban influence operational efficiency, financial outcomes, and employment patterns in Lusaka (Saunders et al., 2019). The inductive approach will complement this by drawing insights directly from transport operators' experiences, revealing practical challenges, adaptive strategies, and effects that may not be fully explained by prior studies (Creswell & Creswell, 2018). Combining the two approaches allows the study to confirm theoretical assumptions while also developing context-specific understanding, strengthening the overall validity of the findings.

Under this design, quantitative and qualitative data were collected at the same time. The quantitative component—implemented through structured questionnaires—will measure changes in operating hours, trip frequency, vehicle utilization, revenue levels, costs, and staffing patterns. This enables the identification of statistical trends and relationships that can be analysed deductively based on regulatory and business performance theories (Saunders et al., 2019). In parallel, qualitative data gathered through interviews, focus group discussions, and document analysis explored the experiences of transport operators, employees, and key stakeholders. These insights help explain why certain operational or financial patterns emerge, how businesses have adapted to the ban, and what challenges or opportunities the policy has created.

Using both quantitative questionnaires and qualitative interviews or focus group discussions allows the researcher to explore not only what has changed in transport businesses but also why these changes have occurred. This dual approach aligns with Saunders et al. (2019), who argue that integrating different forms of evidence enhances the robustness of findings when studying policy impacts and organizational performance.

The study will be conducted in Lusaka, the capital city of Zambia, focusing specifically on major public transport hubs where a significant proportion of long-distance and local passenger movement takes place. These include Intercity Bus Terminus, Lima Tower, Millennium Bus Station, Lumumba Bus Station, and City Market—locations that collectively form the core of Lusaka's urban and interprovincial transport network. These hubs serve as the main departure and transit points for buses, minibuses, and other public service vehicles, making them essential sites for assessing how the Night

Public Service Passenger Transport Ban has affected transport businesses operating between 2021 and 2025.

In terms of numbers, based on available administrative records, the study population across the five major stations is estimated to range between 2,500 and 3,500 public transport operators and workers. RTSA (2022) reports that Lusaka hosts over 1,800 registered public service vehicles (PSVs) operating from Intercity, Lima Tower, Millennium, Lumumba, and City Market. Each vehicle typically employs 1–2 drivers and 1 conductor, bringing the active workforce in these stations to approximately 2,000–3,000 personnel (LCC, 2021; Chirwa, 2022).

Additionally, transport associations and station management teams contribute another 100–150 officials, responsible for oversight, scheduling, and regulatory coordination (Ndhlovu, 2023). Thus, a reasonable total population size for this study is about 2,500–3,500 individuals, representing operators, drivers, conductors, and key administrative stakeholders. For purposes of the study, 3000 will be an adopted population for transport operators and workers while 150 will be adopted as total population for transport associations and station management teams.

Using Cochran's formula for proportions ($Z = 1.96$, $p = 0.5$, $e = 0.05$) gives an initial sample (n_0) of $384.16 \approx 385$ (Cochran, 1977). Applying the finite population correction:

$$n = n_0 / [1 + (n_0 - 1)/N].$$

For $N = 3,150$ (operators, workers, associations, and station managers): $n = 384.16 / [1 + 383.16/3000] \approx 341$ (round up) (Cochran, 1977; Saunders et al., 2019). Therefore, the total sample size for the quantitative design is 341.

For qualitative data (data-saturation), evidence shows saturation in relatively homogenous groups often occurs between 12–15 interviews (Guest, Bunce & Johnson, 2006). Therefore, the study will use 12–15 Key Informant Interviews (KIIs) with station association leaders, station managers, and selected operator representatives. For focus group discussions (FGDs), the study will conduct 2 FGDs with drivers and conductors (one for drivers, one for conductors), each with 6–8 participants.

The study employed a combination of probability and non-probability sampling techniques to ensure that the sample adequately represents the different categories of participants within Lusaka's public transport sector. For the quantitative component, stratified random sampling were used to select operators, drivers, and conductors. Stratification by station (Intercity, Lima Tower, Millennium, Lumumba, and City Market) ensures that each major transport hub contributes proportionately to the sample, thereby improving representativeness and reducing sampling error (Saunders et al., 2019). Within each stratum, simple random sampling was used to select respondents until the required sample size (340) for operators, workers, association leaders, and station managers is achieved, consistent with the Cochran-based calculations. For the qualitative component, purposive sampling was applied to identify participants who possess rich, experience-based insights on operational, financial, and employment impacts of the night transport ban. Purposive sampling is suitable because it intentionally targets individuals who are most knowledgeable about the phenomenon under investigation (Creswell & Poth, 2018). This includes station managers, association leaders, and selected operator representatives who will provide Key Informant Interviews (KIIs), as well as experienced drivers and conductors for focus group discussions (FGDs).

4 Results and Discussion

4.1 To examine the effect of the Night Public Service Passenger Transport Ban on the operational performance of transport businesses in Lusaka, with particular emphasis on the trip frequency and vehicle utilization rates

Respondents were asked whether the night public service passenger transport ban has reduced operating hours. Out of 341 respondents, 119 (34.9%) strongly agreed and 111 (32.6%) agreed that operating hours have reduced. Meanwhile, 43 (12.6%) were neutral, 43 (12.6%) disagreed, and 25 (7.3%) strongly disagreed. The results indicate that a substantial majority acknowledge a direct reduction in operating hours as a consequence of the ban. Reduced operating hours imply limited-service availability and constrained revenue-generating time, which directly affects daily turnover. The relatively small proportion of disagreement suggests that the impact is widely experienced across different transport categories. The findings confirm that the ban has significantly curtailed operational timeframes.

Respondents were asked whether trip frequency has decreased following the implementation of the ban. The results show that 102 (29.9%) strongly agreed and 119 (34.9%) agreed. A total of 51 (15.0%) were neutral, while 43 (12.6%) disagreed and 26 (7.6%) strongly disagreed. These findings establish that most operators have experienced a decline in trip frequency. Reduced trip frequency directly translates into fewer passenger turnovers per vehicle per day. Neutral responses may reflect businesses that were not heavily reliant on night operations. However, the dominant agreement suggests that the ban has materially constrained service intensity.

Respondents were further asked whether vehicle utilization has reduced. Out of 341 respondents, 111 (32.6%) strongly agreed and 128 (37.5%) agreed. 34 respondents (10.0%) were neutral, while 43 (12.6%) disagreed and 25 (7.3%) strongly disagreed. The findings show that vehicle productivity has declined for most transport businesses. Reduced utilization implies that assets are idle for longer periods, lowering return on investment and operational efficiency. The limited disagreement suggests consistency across fleet sizes. Henceforth, the ban has negatively affected asset optimization within

the sector.

The study sought to establish whether daily route scheduling has been disrupted. The results indicate that 94 respondents (27.6%) strongly agreed and 128 (37.5%) agreed. 59 (17.3%) were neutral, 34 (10.0%) disagreed, and 26 (7.6%) strongly disagreed. The majority response reveals that the ban has necessitated operational restructuring. Scheduling disruptions can lead to inefficiencies, congestion during permitted hours, and coordination challenges. Neutral responses may reflect operators who adjusted quickly. Generally, route scheduling has been significantly affected by regulatory restrictions.

Respondents were asked whether operational delays have increased. The findings show that 85 (24.9%) strongly agreed and 119 (34.9%) agreed. 68 respondents (19.9%) were neutral, while 43 (12.6%) disagreed and 26 (7.6%) strongly disagreed. The results propose that congestion and compressed operating windows have contributed to service delays. Increased delays may reduce customer satisfaction and limit daily route cycles. The relatively high neutral responses may indicate variable experiences across routes. Nevertheless, agreement outweighs disagreement, confirming operational strain.

Respondents were asked whether daytime demand compensates for lost night revenue. The results show that 128 (37.5%) strongly agreed and 102 (29.9%) agreed that daytime demand does not compensate for night losses. Forty-three respondents (12.6%) were neutral, while 43 (12.6%) disagreed and 25 (7.3%) strongly disagreed. These findings show that revenue substitution during permitted hours is insufficient for most operators. The dominance of agreement reveals that night operations previously constituted a significant revenue stream. Thus, the ban has created a measurable income gap. Respondents were asked whether peak-hour congestion has affected operations. Out of 341 respondents, 77 (22.6%) strongly agreed and 136 (39.9%) agreed. 51 (15.0%) were neutral, while 51 (15.0%) disagreed and 26 (7.6%) strongly disagreed. These results suggest that compressed operating hours have increased daytime congestion. Congestion reduces trip efficiency and increases fuel and maintenance costs. Although some disagreement exists, the majority perception confirms that peak-hour concentration has operational consequences.

Respondents were asked whether routes or shifts have been adjusted due to the ban. The findings show that 107 (31.4%) strongly agreed and 124 (36.4%) agreed. Forty-three respondents (12.6%) were neutral, 43 (12.6%) disagreed, and 24 (7.0%) strongly disagreed. The results indicate that most transport businesses have implemented adaptive measures in response to regulatory changes. Adjustments may include shortened routes, consolidated trips, or revised shift patterns. Such restructuring reflects strategic adaptation but also signals disruption. Operational realignment has been a common response to the ban.

The general pattern across the eight operational subthemes shows that the night transport ban has exerted a substantial negative influence on operating hours, trip frequency, asset utilization, scheduling efficiency, and service flow. The concentration of agreement across items demonstrates a steady perception of operational strain among transport operators in Lusaka. Cross Tabulation under table 1.

Table 1: Cross Tabulation

Subtheme	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Reduced Operating Hours	119 (34.9%)	111 (32.6%)	43 (12.6%)	43 (12.6%)	25 (7.3%)
Decreased Trip Frequency	102 (29.9%)	119 (34.9%)	51 (15.0%)	43 (12.6%)	26 (7.6%)
Reduced Vehicle Utilization	111 (32.6%)	128 (37.5%)	34 (10.0%)	43 (12.6%)	25 (7.3%)
Disruption of Daily Route Scheduling	94 (27.6%)	128 (37.5%)	59 (17.3%)	34 (10.0%)	26 (7.6%)
Increased Operational Delays	85 (24.9%)	119 (34.9%)	68 (19.9%)	43 (12.6%)	26 (7.6%)
Daytime Demand Not Compensating	128 (37.5%)	102 (29.9%)	43 (12.6%)	43 (12.6%)	25 (7.3%)
Peak Hour Congestion Effects	77 (22.6%)	136 (39.9%)	51 (15.05)	51 (15.05)	26 (7.6%)
Adjustment of routes	107 (31.45)	124 (36.4)	43 (12.6%)	43 (12.6%)	24 (7.0%)

Source: Survey Data (2026)

4.2 To determine the impact of the Night Public Service Passenger Transport Ban on the financial performance of transport businesses, focusing on the attainment of daily revenue targets and overall income stability

Respondents were asked whether daily revenue has reduced following the enactment of the night transport ban. Out of 341 respondents, 130 (38.1%) strongly agreed and 115 (33.7%) agreed. 41 (12.0%) were neutral, while 34 (10.0%) disagreed and 21 (6.2%) strongly disagreed. The results indicate that a considerable majority have experienced a decline in daily revenue. Reduced revenue directly affects liquidity, working capital cycles, and the overall financial stability. The limited proportion of disagreement suggests that revenue contraction is widely experienced across operators. Overall, the results confirm that daily earnings have significantly declined.

Respondents were further asked whether profit margins have declined. The results show that 121 (35.5%) strongly agreed and 119 (34.9%) agreed. Forty-eight (14.1%) were neutral, while 34 (10.0%) disagreed and 19 (5.6%) strongly disagreed. These findings demonstrate that beyond revenue reductions, profitability has also been adversely affected. Declining margins may result from fixed costs remaining constant while revenues decrease. The dominance of agreement confirms widespread financial strain within the sector.

Respondents were asked whether operating costs have increased. Out of 341 respondents, 107 (31.4%) strongly agreed

and 136 (39.9%) agreed. 45 (13.2%) were neutral, while 34 (10.0%) disagreed and 19 (5.6%) strongly disagreed. The majority response suggests that cost pressures have intensified. Increased congestion during permitted hours and inefficiencies may contribute to higher fuel, maintenance, and labor-related expenses. These results demonstrate rising operational expenditure across most transport businesses.

The study sought to determine whether meeting financial obligations has become more difficult. The findings indicate that 116 (34.0%) of the respondents strongly agreed and 122 (35.8%) agreed. 51 (15.0%) were neutral, while 33 (9.7%) disagreed and 19 (5.6%) strongly disagreed. These results demonstrate growing financial pressure, particularly in servicing loans, insurance, and supplier payments. The domination of agreement confirms that liquidity constrictions have intensified.

Respondents were asked whether fuel consumption patterns have changed. The results show that 95 (27.9%) strongly agreed and 133 (39.0%) agreed. Fifty-eight (17.0%) were neutral, while 34 (10.0%) disagreed and 21 (6.2%) strongly disagreed. The findings suggest that compressed operating hours and congestion may have altered fuel efficiency dynamics. Although some neutrality exists, the majority confirm noticeable changes in fuel usage behavior.

Respondents were further asked whether competitiveness has reduced. Out of 341 respondents, 109 (32.0%) strongly agreed and 125 (36.7%) agreed. 47 (13.8%) were neutral, while 36 (10.6%) disagreed and 24 (7.0%) strongly disagreed. These results indicate that market positioning and competitive capacity have been negatively affected. Reduced service hours and constrained flexibility may limit operators' ability to compete effectively.

The study sort to established whether vehicle-level profitability has declined. The results indicate that 118 (34.6%) strongly agreed and 123 (36.1%) agreed. 42 (12.3%) were neutral, while 34 (10.0%) disagreed and 24 (7.0%) strongly disagreed. The majority response confirms declining returns per vehicle. Reduced trip cycles and revenue compression directly affect asset-level profitability.

The respondents were asked whether business sustainability has been affected. The findings show that 132 (38.7%) strongly agreed and 116 (34.0%) agreed. 31 (11.4%) were neutral, while 32 (9.4%) disagreed and 22 (6.5%) strongly disagreed. The dominance of agreement indicates long-term viability concerns among transport operators. Sustained revenue losses and rising costs threaten business continuity. Thus, the results confirm that the ban has materially impacted financial sustainability.

4.3 To assess how the Night Public Service Passenger Transport Ban has influenced workforce levels in the public transport sector

Respondents were asked whether driver working hours have reduced. Out of 341 respondents, 126 (36.9%) strongly agreed and 118 (34.6%) agreed. 43 (12.6%) were neutral, while 32 (9.4%) disagreed and 22 (6.5%) strongly disagreed. Hence, the findings indicate that the ban has directly reduced driver working time, potentially affecting income stability and productivity.

Respondents were further asked whether staff schedules have changed. The results show that 120 (35.2%) strongly agreed and 124 (36.4%) agreed. 42 (12.3%) were neutral, while 33 (9.7%) disagreed and 22 (6.5%) strongly disagreed. These findings confirm prevalent schedule restructuring as a response to compressed operating hours. The study established whether job losses or staff reductions have occurred. The results indicate that 101 (29.6%) strongly agreed and 118 (34.6%) agreed. 54 (15.8%) were neutral, while 40 (11.7%) disagreed and 28 (8.2%) strongly disagreed. The majority perception suggests workforce contraction within the sector, reflecting financial and operational pressures.

Respondents were asked whether worker income has reduced. Out of 341 respondents, 133 (39.0%) strongly agreed and 112 (32.8%) agreed. Thirty-eight (11.1%) were neutral, while 34 (10.0%) disagreed and 24 (7.0%) strongly disagreed. The results demonstrate that income compression is widely experienced, likely due to reduced working hours and trip frequency.

The findings show that 110 (32.3%) strongly agreed and 125 (36.7%) agreed. 49 (14.4%) were neutral, while 35 (10.3%) disagreed and 22 (6.5%) strongly disagreed. These results indicates that the majority response indicates growing dissatisfaction, potentially linked to income reduction and schedule disruption. Respondents were further asked whether retaining skilled staff has become more difficult. The results show that 104 (30.5%) strongly agreed and 129 (37.8%) agreed. 51 (15.0%) were neutral, while 36 (10.6%) disagreed and 21 (6.2%) strongly disagreed. These findings suggest that workforce stability has been negatively affected. Financial strain and reduced working hours may contribute to turnover intentions.

Out of 341 respondents, 115 (33.7%) strongly agreed and 127 (37.2%) agreed. 45 (13.2%) were neutral, while 32 (9.4%) disagreed and 22 (6.5%) strongly disagreed. The dominance of agreement confirms declining morale within transport businesses, reflecting cumulative operational and financial pressures.

Respondents were asked whether shift patterns had to be redesigned. The findings indicate that 122 (35.8%) strongly agreed and 119 (34.9%) agreed. Forty-two (12.3%) were neutral, while 34 (10.0%) disagreed and 24 (7.0%) strongly disagreed. The results confirm that structural adjustments in staffing arrangements have been widely implemented. While such redesign reflects adaptive management, it also signifies significant operational disruption.

4.4 Chi Square Tests

Table 2: Chi-square Tests

Subtheme	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Driver Working Hours Reduced	126	118	43	32	22
Staff Schedules Changed	120	124	42	33	22
Job Losses / Reduced Staff	101	118	54	40	28
Employee Dissatisfaction Increased	110	112	38	34	24
Worker Income Reduced	133	112	38	34	22
Retention of Skilled Staff Harder	104	129	51	36	21
Staff Morale Declined	115	127	45	32	22
Adjustment of routes	122	119	42	34	24
Total	931	959	353	275	185

Grand Totals: 931 + 959 + 353 + 275 + 185, N= 2703

Table 3: Chi Square Tests

Test	Value	df	Asymptotic Sig.(2-sides)
Pearson Chi-Square	16.329	28	0.961
Likelihood Ratio	16.245	28	0.964
Linear-by-Linear Association	0.028	1	0.867
N of Valid Cases	16.245	2703	

Table 4: Expected Cell Frequencies

Statistic	Value
Minimum expected count	21.76
Maximum expected count	120.98
Statistic	
Cells with expected count < 5	0

These results confirm the Chi-Square assumption is satisfied, since all expected frequencies are greater than 5.

Decision Rule

Significance level:

$\alpha=0.05$,

Decision:

$p=0.961 > 0.05$

Therefore:

Fail to Reject H_0

The Pearson Chi-Square test was conducted to determine whether response distributions differed significantly across the employment and staffing subthemes related to the night public service passenger transport ban. The results indicated that the association between the subthemes and response categories was not statistically significant, $\chi^2(28) = 16.329$, $p = 0.961$. This suggests that the pattern of responses was broadly similar across the different employment-related indicators. The findings imply that respondents consistently perceived employment impacts across the various staffing dimensions, including reduced working hours, scheduled adjustments, income reduction, and declining staff morale. In other words, the employment effects of the night transport ban were experienced relatively uniformly across the different aspects of labor conditions within the transport sector.

4.5 Qualitative Findings

This section presents the qualitative findings derived from Key Informant Interviews (KIIs) and Focus Group Discussions (FDGs) conducted with station association leaders, station managers, selected operators, drivers, and conductors in Lusaka. The qualitative inquiry was designed to complement the quantitative results by providing deeper insight into regulatory impacts, operational disruptions, financial implications, employment dynamics, safety concerns, and coping strategies associated with the Night Public Service Passenger Transport Ban (2021-2025). A thematic analysis approach guided by Braun and Clarke's (2006) framework was employed to identify recurring patterns and meanings within the narratives. Each question in the interview and focus group guides was treated as a distinct theme to ensure analytical alignment with the study objectives. The qualitative findings not only corroborate the statistical trends observed in the survey data but also illuminate the lived experiences, managerial interpretations, and unintended consequences surrounding the implementation of the ban.

Key Informant Interviews (KII)

Respondent Coding Framework

The table below presents the coding structure used to anonymize participants in the qualitative component of the study. The coding systems was designed to protect respondent identity while clearly distinguishing participant categories, institutional roles, and data collection methods. Codes were assigned systematically according to interview type and participant position within the transport sector in Lusaka.

Table 5: Respondent coding framework

Code Prefix	Code Prefix	Participant Category	Description of Respondent	Example Code
KII-SM	Key Informant Interview (KII)	Station Manager	Individual responsible for day-to-day station administration	KII-SM01
KII-AL	Key Informant Interview (KII)	Association Leader	Leader of a transport station or route association	KII-AL02
KII-OR	Key Informant Interview (KII)	Operator Representative	Owner or appointed representative of transport operators	KII-OR03
KII-FO	Key Informant Interview (KII)	Fleet Owner	Individual owning multiple vehicles operating under the station	KII-FO04
FGD-D	Focus Group Discussion (FGD)	Driver	Licensed public service vehicle driver	FGD-D01
FGD-C	Focus Group Discussion (FGD)	Conductor	Bus or minibus conductor responsible for passenger coordination	FGD-C02

Coding structure Explanation

The first part of the code categorizes the data collection method: KII for Key Informant Interviews and FGD for Focus Group Discussions. The second part stipulates the respondent category (e.g., SM = Station Manager, AL = Association Leader, OR = Operator Representative, FO = Fleet Owner, D = Driver, C = Conductor). The numerical suffix differentiates individual participants within each category. For example, KII-AL02 refers to the second Association Leader interviewed under the Key Informant Interview schedule, while FGD-D01 refers to the first Driver who participated in the Focus Group Discussion. This coding framework warranted systematic organization of qualitative data, sustained confidentiality, and facilitated traceability during thematic analysis without revealing personal identifiers.

Operational Effects of the Ban

Key informants repetitively described important operational disruption following the introduction of the ban. One station manager stated, “Our station used to operate almost 24 hours, but now activities completely stop at night (21:00hrs), which has reduced coordination flexibility.” (KII-01, Station Manager). Another association leader clarified, “We have had to compress all departures into daytime hours, which created congestion and confusion.” (KII-02, Association Leader). An operator representative added, “Night routes were our most reliable schedules for long-distance trips, and removing them disrupted our planning.” (KII-03, Operator Representative). In the same way, another respondent highlighted, “Loading patterns have changed drastically; we struggle to manage passenger flows within limited hours.” (KII-04, Station Supervisor). These accounts indicate that the ban has altered operational rhythms, constrained flexibility, and intensified daytime congestion.

Changes in Trip Frequency, Passenger Flow, and Vehicle Utilization

Informants reported notable drops in trip frequency and vehicle productivity. One participant observed, “Trips per vehicle have reduced because we cannot rotate at night anymore.” (KII-05, Operator). Another explained, “Passenger numbers fluctuate unpredictably since everyone now travels during the same daytime window.” (KII-06, Association Leader). A third stated, “Vehicles remain parked longer, especially those that depended on overnight departures.” (KII-07, Fleet Owner). Another added, “Utilization rates have dropped; some buses only manage one round trip instead of two.” (KII-08, Station Manager). These narratives confirm reduced asset productivity and compressed passenger flows, reinforcing the quantitative evidence on diminished operational intensity.

Financial Performance Implications

Financial strain occurred as a dominant theme. One informant remarked, “Revenue has gone down significantly because night travel was profitable for long-distance operators.” (KII-09, Operator). Another stated, “Profit margins are shrinking due to fewer trips and higher daytime operational costs.” (KII-10, Association Leader). A third explained, “We still incur fixed costs like loan repayments, but income has reduced.” (KII-11, Fleet Owner). Additionally, one manager noted, “Fuel and maintenance expenses have increased due to congestion during the day.” (KII-12, Station Manager). These responses highlight revenue contraction, cost pressures, and declining profitability across the sector.

Compliance and Administrative Challenges

Compliance with restricted hours was described as administratively burdensome. One leader noted, “Ensuring all operators comply requires constant monitoring and coordination.” (KII-13, Association Leader). Another explained, “There is confusion about enforcement guidelines and penalties.” (KII-14, Station Manager). A third respondent stated, “We had to redesign departure schedules repeatedly to align with the regulation.” (KII-15, Operator Representative). Another added, “Communication from regulators was not always clear at the beginning.” (KII-16, Station Supervisor). These accounts suggest regulatory ambiguity and operational strain during adaptation phases.

Employment and Staffing Patterns

Employment adjustments were widely reported. One informant stated, “Some drivers lost overtime opportunities because

night shifts were eliminated.” (KII-17, Operator). Another explained, “We reduced support staff during night hours since operations stop early.” (KII-18, Station Manager). A third observed, “Shift patterns had to be redesigned, affecting income stability.” (KII-19, Association Leader). Another added, “A few casual workers were laid off because the workload reduced.” (KII-20, Fleet Owner). These testimonies indicate reduced labor demand and altered staffing structures.

Safety and Security Concerns

Safety perceptions were mixed. One respondent noted, “Night robberies have reduced because vehicles are no longer on the road late.” (KII-21, Station Manager). However, another cautioned, “Daytime congestion increases accident risks.” (KII-22, Operator). A third stated, “Passengers sometimes get stranded because they miss the last permitted departure.” (KII-23, Association Leader). Another remarked, “Security improved at night, but daytime crowd control is now a bigger challenge.” (KII-24, Station Supervisor). Therefore, despite the fact some security benefits were observed, new operational safety challenges emerged.

Adaptation and Coping Strategies

Operators described various coping mechanisms. One noted, “We combined routes to maximize passenger loads during the day.” (KII-25, Operator). Another explained, “Some businesses diversified into parcel delivery services.” (KII-26, Fleet Owner). A third stated, “We adjusted departure times earlier to capture early morning travelers.” (KII-27, Association Leader). Another added, “Fleet rotation systems were introduced to minimize idle time.” (KII-28, Station Manager). These adaptations mirror resilience but also structural adjustment costs.

Stakeholder Engagement and Dialogue

Engagement levels were described as erratic. One leader stated, “There were consultations before implementation, but follow-up dialogue has been limited.” (KII-29, Association Leader). Another remarked, “Operators feel their concerns are not fully considered.” (KII-30, Operator Representative). A third added, “Coordination with regulators improved slightly over time.” (KII-31, Station Manager). Another emphasized, “We rely mostly on association meetings to relay concerns.” (KII-32, Fleet Owner). This suggests partial but insufficient stakeholder coordination.

Unintended Consequences

Informants identified both positive and negative spillovers. One noted, “Daytime trade around stations has increased.” (KII-33, Station Manager). Another stated, “Some informal operators are now operating illegally at night.” (KII-34, Association Leader). A third explained, “Passengers sometimes opt for unsafe alternatives.” (KII-35, Operator). Another observed, “Family time for drivers improved due to reduced night shifts.” (KII-36, Fleet Owner). These unintended outcomes reveal complex socio-economic ripple effects.

Recommendations to Policymakers

Respondents proposed several reforms. One recommended, “Introduce regulated night permits instead of a complete ban.” (KII-37, Association Leader). Another suggested, “Engage operators more frequently before reviewing the policy.” (KII-38, Operator). A third added, “Provide financial relief measures for affected businesses.” (KII-39, Fleet Owner). Another emphasized, “Strengthen enforcement against illegal operators.” (KII-40, Station Manager). These recommendations emphasize policy review, stakeholder inclusion, and regulatory balance.

Focus Group Discussions (FGD)

Changes in Working Routines

Drivers and conductors reported substantial routine disruptions. One participant stated, “We used to alternate between day and night shifts, but now everything is daytime.” (FGD-01, Driver). Another added, “Our number of trips per day has reduced.” (FGD-02, Conductor). A third remarked, “We wake up earlier to maximize daytime hours.” (FGD-03, Driver). Another observed, “Shift patterns are tighter and more exhausting.” (FGD-04, Conductor). These reflections indicate compressed schedules and increased daytime workload intensity.

Financial Effects on Workers

Income reductions were widely emphasized. One driver stated, “My monthly income dropped because night bonuses stopped.” (FGD-05, Driver). Another explained, “Commissions are lower since we carry fewer passengers.” (FGD-06, Conductor). A third added, “Overtime earnings disappeared completely.” (FGD-07, Driver). Another remarked, “Some days we return home with very little profit.” (FGD-08, Conductor). These accounts confirm individual financial strain among frontline workers.

Passenger Interaction and Demand

Participants described intensified daytime demand. One noted, “Passengers rush during peak hours, creating tension.” (FGD-09, Driver). Another stated, “We cannot meet all demand because time is limited.” (FGD-10, Conductor). A third added, “Some passengers complain about overcrowding.” (FGD-11, Driver). Another explained, “It is harder to maintain service quality.” (FGD-12, Conductor). Thus, demand compression has affected service delivery and customer relations.

Safety and Security Concerns

Safety concerns were also discussed. One participant observed, “Night robberies reduced, which is positive.” (FGD-13, Driver). Another cautioned, “Daytime congestion increases accident risks.” (FGD-14, Conductor). A third stated, “We sometimes feel unsafe managing large crowds.” (FGD-15, Driver). Another remarked, “Passengers stranded at night blame us.” (FGD-16, Conductor). These insights reflect both security improvements and new operational risks.

Coping Strategies

Drivers and conductors outlined adaptation strategies. One noted, “We try to load quickly to maximize trips.” (FGD-17, Driver). Another added, “Some of us look for side jobs after work.” (FGD-18, Conductor). A third explained, “We coordinate with colleagues to manage congestion.” (FGD-19, Driver). Another stated, “We adjust fares slightly were permitted to cover losses.” (FGD-20, Conductor). These coping mechanisms reveal frontline resilience but underscore persistent economic pressure.

Suggestions to Policymakers

Participants proposed reforms. One suggested, “Allow limited night operations under strict supervision.” (FGD-21, Driver). Another added, “Improve security instead of banning night travel.” (FGD-22, Conductor). A third stated, “Consult drivers before implementing such policies.” (FGD-23, Driver). Another remarked, “Provide subsidies or fuel support.” (FGD-24, Conductor). Together, the qualitative findings from both KIIs and FGDs strengthen the quantitative evidence of operational interruption, revenue contraction, employment adjustments, and adaptive restructuring within Lusaka’s transport sector following the implementation of the Night Public Service Passenger Transport Ban.

Implications of Findings

The findings of this study have several important implications for policy, transport sector management, and urban economic development in Lusaka. First, the results indicate that the Night Public Service Passenger Transport Ban has significantly affected the operational performance of transport businesses, particularly through reduced operating hours, decreased trip frequency, and lower vehicle utilization. This suggests that regulatory interventions aimed at improving road safety can have unintended operational consequences for transport operators who depend on extended operating hours to maximize daily passenger volumes. As a result, policymakers need to consider designing regulatory measures that balance safety objectives with operational sustainability. Flexible policy alternatives—such as regulated night operations, stricter driver monitoring, or targeted enforcement against unsafe operators—may achieve safety outcomes without excessively constraining business activity.

Second, the findings reveal substantial financial implications for transport businesses, including declining daily revenues, shrinking profit margins, and rising operating costs. These financial pressures imply that the ban may reduce the long-term sustainability of small and medium transport enterprises that dominate Lusaka’s public transport system. Many operators function on narrow profit margins and rely on high trip turnover to maintain profitability. When operating hours are restricted, fixed costs such as vehicle maintenance, fuel, insurance, and licensing remain unchanged, thereby increasing the cost burden per trip. This has implications for business resilience in the sector, as continued financial strain could lead to reduced fleet sizes, increased fares, or eventual market exit by smaller operators. For policymakers and regulatory agencies, the implication is that transport regulations should be accompanied by supportive measures—such as structured transport planning, route optimization, or incentives for compliance—to maintain economic stability within the sector.

Third, the study’s findings highlight significant employment implications arising from the night transport ban. Reduced operating hours were associated with fewer work shifts for drivers and conductors, income reductions, and in some cases job losses. Given that the public transport sector is a major source of employment in Lusaka’s informal and semi-formal economy, such labour market effects may have broader socio-economic consequences. Reduced incomes for transport workers may affect household welfare, increase financial vulnerability, and limit economic opportunities for individuals who depend on transport-related employment. Therefore, the findings imply that transport policies should also consider labour implications, ensuring that regulatory decisions do not unintentionally undermine employment stability in urban transport systems.

Finally, the study has broader implications for urban mobility and economic productivity in Lusaka. Public transport plays a critical role in enabling night-time economic activities, including hospitality services, health services, security work, and informal trading. Restrictions on transport availability during late-night hours may therefore limit mobility for workers and reduce the efficiency of businesses that operate beyond traditional daytime schedules. This suggests that transport policies must be integrated with broader urban development strategies that consider the needs of a growing city economy. By understanding the operational, financial, and employment impacts identified in this study, policymakers can develop more balanced transport regulations that simultaneously promote road safety, business sustainability, and inclusive urban mobility.

4.6 Discussion of Findings

The findings establish that the Night Public Service Passenger Transport Ban significantly reduced operating hours, trip

frequency, and vehicle utilization, by this means constraining operational performance. From a regulatory impact theory perspective, regulations frequently generate both intended and unintended consequences that reshape firm performance and operational efficiency, as argued by Baldwin et al. (2012) and OECD (2021). Although the ban was introduced under Statutory Instrument No. 76 of 2016 and later amended by Statutory Instrument No. 51 of 2021 (Government of Zambia, 2016; 2021) primarily to augment safety and order, the results indicate measurable trade-offs in service supply. Transport economics theory emphasizes that frequency and utilization are core determinants of productivity and network performance (Small & Verhoef, 2007; Meyer et al., 1965). The compression of service hours inevitably reduced the number of trip cycles per vehicle, limiting output within a fixed asset base. Similar operational reductions under mobility limitations have been documented in Southern Africa, and this aligns with Chigudu (2021) and Gwachamba and Chikozho (2023), who observed regulatory-induced supply alterations in urban transport markets.

Financial Strain and Market Competitiveness

The study recognized significant declines in daily revenue, profit margins, and vehicle-level profitability, indicating financial stress across transport businesses. Financial management theory suggests that profitability depends on stable revenue flows relative to cost structures, and reduced turnover inevitably compresses margins, as explained by Brigham and Ehrhardt (2017) and Pandey (2015). The findings show that although revenue declined, operating costs increased, creating an adverse cost-revenue equilibrium. Regulatory compliance and operational restructuring often impose additional transaction costs, and this aligns with Baldwin et al. (2012) and OECD (2021). Urban movement studies across Africa report similar financial weaknesses where operators rely on high-frequency, low-margin service models, and this aligns with World Bank (2021) and UN-Habitat (2021). Thus, the financial contraction observed in Lusaka mirrors structural fragility within informal urban transport economies.

Reduced competitiveness and sustainability fears further exemplify transport economics theory, which emphasizes flexibility and scale efficiency as drivers of market resilience (Small & Verhoef, 2007; African Development Bank, 2022). When operating windows narrow, firms lose temporal advantages and demand responsiveness, weakening competitive positioning. Zambia's transport reform history shows that policy shifts often trigger financial volatility, and this aligns with Phiri (2020) and Situmbeko and Zulu (2021). Reports from the Road Transport and Safety Agency (2022; 2023) highlight variations in sector performance following regulatory adjustments, reinforcing this pattern. Media coverage of operator grievances over reduced income similarly supports these findings, and this aligns with Zulu (2023). From a sustainability perspective, long-term viability requires balancing economic, social, and regulatory objectives, which aligns with Elkington (1997). Hence, the results indicate that the ban has disrupted financial stability and competitive capacity within Lusaka's transport sector.

Labor Market Adjustments and Employment Effects

The findings disclose condensed driver working hours, income compression, job losses, and declining staff morale, indicating significant labour market adjustments. Labour economics theory suggests that when demand for labour drops due to regulatory or market shocks, wages and working hours adjust downward, which aligns with Akerlof and Yellen (1986) and Shapiro and Stiglitz (2024). In informal labour markets, these changes occur rapidly and often without formal protections, and this aligns with ILO (2020) and Mutapic (2022). The reduction in operational hours directly reduced paid shifts for drivers and conductors, leading to income reduction. Similar employment instability in Zambia's informal transport sector during regulatory changes has been documented, and this aligns with Chirwa (2022). Urban labour coping strategies in African cities frequently involve household-level income adjustments when mobility work declines, and this is evident in the research conducted by Agyemang (2021) and UNECA (2020). Therefore, the employment effects identified in this study reflect established labour adjustment mechanisms.

Increased employee dissatisfaction and difficulty retaining skilled staff further correspond with efficiency wage theory, which argues that reduced earnings undermine morale and productivity, aligning with Akerlof and Yellen (1986). Worker discipline and retention challenges intensify when earnings are unstable, and this aligns with Shapiro and Stiglitz (1984). Sector reports indicate staffing adjustments and shift redesign in Lusaka following the ban, and this aligns with Lusaka Transport Operators Association (2022) and Daily Nation (2023). Equivalent patterns in Southern African cities under mobility restrictions have been reported, and this aligns with Turok and Visagie (2023) and Moyo and Nkondo (2022). Given Lusaka's continued urban growth, where transport employment supports many households, staffing instability carries broader socio-economic implications, and this aligns with Central Statistical Office (2023). Subsequently, labour market interruptions represent both organizational and livelihood-level consequences of regulatory intervention.

Policy Trade-Offs Between Safety Objectives and Economic Resilience

An emerging theme concerns the policy trade-off between safety regulation and economic resilience. Regulatory impact theory acknowledges that safety-oriented controls may yield economic spillovers requiring careful standardization, and this aligns with and OECD (2021). While the ban may contribute to road safety and crime prevention objectives, as reported in Mulenga and Kaluba (2020) and Zambia Police Service (2021), the economic costs for operators are substantial. Urban mobility literature emphasizes that transport systems are foundational to economic competitiveness and inclusive growth, and this aligns with World Bank (2022) and African Development Bank (2022). When restrictions destabilize operational practicability, sector resilience weakens, a pattern also observed during global mobility controls, bringing into line with UITP (2021) and Jenelius & Cebecauer (2020). The Lusaka case hence demonstrates the strain between governance goals and market sustainability.

From an institutional reform perspective, Zambia's transport sector has historically experienced restructuring and policy-

induced instability, and this aligns with Phiri (2020) and Rakner (2022). Informal transport governance is inherently adaptive yet vulnerable to rigid enforcement, aligning with Abraham and Mwansa (2021) and Behrens et al. (2019). The findings suggest that regulatory rigidity may limit adaptive capacity within a liberalised and informalized market structure, which aligns with Tukumbi (2023) and ZIPAR (2023). Public management theory argues that effective regulation balances control with flexibility, aligning with Hood (1991). Sustainable policy design therefore requires iterative evaluation and stakeholder engagement to mitigate adverse economic externalities.

5 Conclusions and Recommendations

The study concludes that the night public service passenger transport ban has had significant implications for the performance of transport businesses in Lusaka. While the policy was introduced primarily to enhance public safety and reduce criminal activities associated with night travel, it also produced unintended economic consequences for transport operators. The restriction of operating hours reduced operational efficiency, limited revenue generation, and affected employment opportunities within the sector. Generally, the findings highlight the complex relationship between regulatory interventions and business performance in the urban transport sector. Transport policies designed to address security concerns can inadvertently affect the economic sustainability of small and medium transport enterprises that rely on continuous service operations. The evidence from this study suggests that although the policy may have contributed to safety objectives, it simultaneously created operational and financial pressures for transport businesses. Therefore, achieving a balance between public safety and economic sustainability remains essential. Policymakers must consider the broader socio-economic implications of transport regulations and ensure that regulatory interventions are accompanied by supportive measures that mitigate adverse effects on transport operators and related stakeholders.

Recommendations

Introduce a regulated night transport permit system for compliant operators.

The study found that the Night Public Service Passenger Transport Ban significantly reduced operating hours, trip frequency, and vehicle utilization, which negatively affected the operational performance of transport businesses. To balance road safety objectives with business sustainability, it is recommended that the government, through the Road Transport and Safety Agency (RTSA), introduce a regulated night transport permit system. Under this system, operators who meet strict safety standards—such as verified driver training, functional vehicle safety equipment, and compliance with fatigue management rules—should be allowed to operate during controlled night hours. This approach would maintain safety oversight while restoring limited night-time mobility and enabling compliant operators to recover some lost operational capacity.

Flexible workforce management and reskilling programs

Stakeholders in the transport industry to introduce flexible workforce management and reskilling programs including part time scheduling, role reallocation and training for alternative functions within the transport value chain. This approach will help retain employees, minimize layoffs and ensure workforce adaptability in response to changing operational demands

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Ethical considerations

The article followed all ethical standards appropriate for this kind of research.

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