International Journal of
Science, Architecture, Technology and Environment

Exploring the Opportunities and Challenges Experienced Among Bajaj Drivers

Mika Allyza D. Giango[1], Ailysah M. Anub[1], Jesriel A. Custoya[1], Rowelan M. Quimpan[1], Angie P. Butalid[1], Jamaica Mae S. Alas[1], John Zoilo E. Cebreros[1], Chelsea Rose D. Tero[1], and Rodelio B. Pasion, PhD[1*]

[1]*Tungao National High School, Tungao, Butuan City, Philippines*

[*]*Corresponding author, rodelio.pasion001@deped.gov.ph*

DOI: https://doi.org/10.63680/ijsate0326082.064

Abstract

The Bajaj industry served as a critical lifeline for local public transport in Barangay Tungao, Butuan City, filling essential mobility gaps for students and residents where traditional jeepneys are unavailable. Despite this vital role, the sector operates in a precarious, informal environment. Anchored on Maslow's Hierarchy of Needs, this study explored the lived experiences, specifically the opportunities and challenges, of Bajaj drivers. Utilizing a phenomenological qualitative design, in-depth interviews and focus group discussions with ten purposively selected drivers. Findings revealed that the primary opportunity driving this profession is economic survival; it provides immediate income to support family needs and education. Drivers also valued the autonomy of self-employment and their ability to assist the community during emergencies. However, the most significant challenge identified was the lack of legal franchises rather than market competition. The constant threat of government apprehension or "dakop" creates severe financial instability, forcing drivers to rely on "diskarte" and strict time management. The study concludes that, while these drivers are essential, their lack of legal status prevents them from meeting their safety needs. Consequently, the study recommends that Local Government Units transition from punitive measures to a supportive regulatory framework that grants franchises to legitimize operations and ensure safer public transport.

Keywords: Bajaj Drivers, Economic Survival, Franchises, Informality, Maslow's Hierarchy of Needs, Public Transportation, Phenomenological, Qualitative Design, Barangay Tungao, Butuan City, Philippines

Introduction

In many corners of the Philippines, especially in smaller barangays like Tungao in Butuan City, getting from one place to another is not as easy as hailing a bus or calling for a taxi. For many locals, the Bajaj, a three-wheeled vehicle, had become more than just a ride. It served as a daily companion, a lifeline, and a source of pride and livelihood for drivers. It originated in Pune, Maharashtra, India. Bajaj Auto was founded on November 29, 1945, by Bachraj Trading Corporation Ltd. Initially focused on importing two- and three-wheeled vehicles, the company began manufacturing in 1959, producing Vespa scooters under a license from

Piaggio. The company later changed its name to Bajaj Auto Pvt Ltd in 1960 and then to Bajaj. Auto Ltd. McKinsey & Company (2010).

Kedir and Nega (2021) said that Bajaj drivers had become essential to the daily lives of people in rural areas because they provide a practical, often solitary way to get around when there is little or no public transportation. These drivers created important connections and opportunities for everyone who lacked them by providing services to schools, hospitals, and workplaces. Bajaj services were flexible and affordable, which helped the economy and society in rural communities by providing access to goods and services that people could not previously obtain. This transportation network strengthened the economy and brought people together by connecting them to essential services.

Driving for Bajaj was a great way to make cash and offered flexible hours, but it also came with its own set of issues. Abdullhahi & Ismail (2021) highlighted numerous issues faced by Bajaj drivers, including fluctuating fuel costs, competition with both formal and informal transportation providers, constantly changing traveler requests, and ongoing security concerns. These factors together made the working environment unsafe, with vulnerabilities in the economy and its operations. As a result, Bajaj drivers often faced financial instability and stress, which can affect their overall well-being. Finding lasting solutions to these problems was key to making the drivers' lives and jobs safer.

According to Ali and Abdi (2022), this revealed a significant gap in research needed to understand the complex realities of their job fully. Bajaj drivers were widely used and contributed greatly to the local economy, but their own experiences were often ignored. This presented a clear gap in exploration, as there was a lack of comprehensive, in-depth studies examining the specific opportunities and challenges these drivers faced in their day-to-day work. While others may see them on highways or roads, they have a limited understanding of their profitable realities, the risks they encounter, and the outcomes for their professional growth.

Filling this research gap had significant practical implications and is essential in any academic endeavor. Mohamed and Jama (2020) emphasized the importance of addressing this research gap to support focused solutions and strong support systems. These forms of mediation are essential for boosting financial stability, improving working conditions, and ultimately raising the standard of living for these essential benefit providers. By better understanding their experiences, policymakers can make arrangements that genuinely address their needs and advance more feasible and equitable transportation in rural areas, empowering local governments and stakeholders to tailor interventions to rural-specific needs and foster sustainable livelihoods for Bajaj drivers.

Thus, this study's primary objective was to carefully examine the challenges and opportunities faced by Bajaj drivers, particularly in Barangay Tungao, Butuan City. These bits of knowledge were eventually anticipated to not only advance the livelihoods and common well-being of Bajaj drivers but also make a significant contribution (Alemu et al., 2025). There is a gap in this kind of research and in the support available to drivers due to a lack of local, in-depth understanding. By documenting the life of drivers about their work, finances, and their social and intellectual life, this study aimed to understand the drivers in more depth and in relation to the self and the family. The study also aimed to understand how these drivers can be better supported in the future in meaningful, practical, and contextually grounded ways, and to ensure that support is sustainable.

Related Studies

This chapter presented the relevant literature and studies that the researchers considered in strengthening the importance of the present study. It provided support for the information and details discussed in this study.

Bajaj vehicles have become a common and indispensable mode of transportation in many urban areas, particularly in developing countries where formal public transport systems are often limited or insufficient. This study examines the role of Bajaj vehicles in urban mobility, focusing on their economic and social significance for both commuters and drivers. The study is conducted to understand better how these three-wheeled vehicles contribute to daily transportation needs and livelihood opportunities, especially among low- to middle-income populations.

In the Philippines, the three-wheeled Bajaj is widely recognized for its affordability, durability, and reliability, making it a practical solution for short-distance travel and informal transport services. Moreover, Bajaj vehicles support various income-generating activities, including delivery services, private passenger transport, and mobile food vending. Their relatively low acquisition and operating costs allow drivers to sustain daily earnings while providing accessible transportation options for communities with limited alternatives. Therefore, the continued use of Bajaj vehicles highlights their importance not only as a mode of transport but also as a vital component of urban livelihoods (Kservico, 2025).

Building on this context, Bajaj also plays a crucial role in strengthening urban transportation systems by providing efficient, low-cost mobility for both people and goods. This study further explores why Bajaj vehicles remain widely used despite regulatory challenges and competition from formal transport services. In particular, their operational flexibility, such as adaptable routes, variable schedules, and the ability to serve narrow or underserved areas, makes them a preferred option in cities where public transportation does not fully reach all social and economic groups.

Furthermore, Bajaj services are easily accessible, require no prior booking, and offer convenient door-to-door transport, enhancing their appeal to daily commuters and small-scale traders. Consequently, as urban populations continue to grow and mobility demands increase, Bajaj vehicles persist as a practical and responsive transport solution, filling critical gaps left by conventional public transport systems (Mohamed et al., 2022).

In addition, in densely populated cities such as Mogadishu, the convenience of hiring a Bajaj without advance arrangements has significantly contributed to its growing popularity among residents who require quick, flexible, and reliable transportation. This study further examines how the ease of access and on-demand nature of Bajaj services respond to the mobility needs of urban populations, particularly in cities with limited formal transport infrastructure. Moreover, the study is conducted to address emerging concerns regarding the environmental impact of widespread Bajaj use. Recent research has explored the potential of converting Bajaj vehicles into hybrid or alternative-energy models to reduce fuel dependence and minimize harmful emissions. Consequently, addressing environmental sustainability has become a key consideration in evaluating the future viability of Bajaj vehicles within rapidly urbanizing cities (Sharif, 2024).

Despite their significant contribution to urban mobility, Bajaj drivers continue to face numerous challenges that affect both their livelihood and the overall efficiency of the transport sector. This study also aims to examine the various difficulties associated with Bajaj driving, including informal employment arrangements, unstable income, exposure to health and safety risks, inadequate infrastructure, and increasing competition from other modes of transportation. Nevertheless, existing research suggests that with proper regulation, infrastructure support, and service optimization, Bajaj operations can be better integrated into urban

transport systems. Improving and formalizing Bajaj services can contribute to safer, more sustainable, and more equitable mobility for urban residents.

Ultimately, strengthening this sector is essential for enabling cities to address persistent transportation challenges while supporting the livelihoods of informal transport workers (Manuka et al., 2022). Similarly, it is important to note that many drivers working within the informal transport sector may not have high levels of formal education; however, they possess extensive experiential knowledge of city routes, traffic patterns, and local destinations. This study examines the value of such practical knowledge and challenges the assumption that formal education alone determines competence in urban transportation systems. The study aims to highlight how these drivers play a crucial role in sustaining daily mobility despite limited access to formal credentials. Despite their skills and contributions, Bajaj drivers often face social and economic stigma that affects their dignity, self-perception, and opportunities for social mobility. Furthermore, similar patterns have been documented in other countries, where the absence of formal recognition and professional status marginalizes informal transport workers. As a result, this lack of recognition restricts drivers' access to institutional support. It reinforces inequality within urban labor systems, underscoring the need for more inclusive and socially responsive transport policies (Nair, 2023).

In addition to these social challenges, institutional support for Bajaj drivers remains limited and often inaccessible. This study also aims to examine the effectiveness of government programs intended to support informal workers in the transport sector and to understand why many drivers remain excluded from these initiatives. Although various government programs are designed to assist, such as social protection, livelihood support, and financial aid, participation among Bajaj drivers remains low. This situation is largely attributed to limited awareness of available programs, complicated administrative requirements, and a persistent lack of trust in government institutions. Consequently, many Bajaj drivers continue to operate under precarious conditions without benefiting from policies intended to improve their working environment, income stability, and long-term financial security, thereby reinforcing their vulnerability within the informal economy (Gutierrez & Alonsagay, 2021). At the same time, Bajaj drivers must navigate complex regulatory frameworks that are intended to promote safety, fairness, and order within urban transport systems. This study examines how these regulations shape the daily experiences of Bajaj drivers and influence their ability to sustain a stable livelihood. In the Philippines, for instance, drivers are required to secure local government permits or franchises before operating, a process designed to ensure that only authorized vehicles are allowed on public roads. However, the study is conducted to highlight how the financial costs of permits, lengthy approval processes, and penalties for delayed renewals often impose additional economic and administrative burdens on drivers. As a result, many Bajaj drivers struggle to comply fully with regulatory requirements, which can expose them to apprehension and fines while further reinforcing their vulnerability within the informal transport sector (Bajaj Philippines, 2024).

Furthermore, compliance with mandatory safety and emissions inspections places additional pressure on Bajaj drivers and affects their earning capacity. This study also explores how safety and environmental regulations, while essential for public welfare, can unintentionally disadvantage informal transport workers when adequate support mechanisms are lacking. Although these inspections are necessary to maintain road safety and reduce environmental harm, the costs of vehicle repairs, inspection fees, and the time spent completing compliance procedures reduce drivers' daily income. In addition, route restrictions confine Bajaj operations to designated areas, often forcing drivers into highly competitive zones with limited passenger demand. Consequently, these constraints restrict income opportunities and intensify competition among drivers, highlighting the need for more balanced and supportive regulatory approaches within urban transport policy (Clean Air Asia, 2021). From a socioeconomic perspective, Bajaj driving remains a crucial

source of employment in many developing cities where formal job opportunities are limited. This study examines the role of Bajaj driving as a livelihood strategy that supports household income and economic survival among marginalized urban populations.

In Mogadishu, for instance, Bajaj drivers play a vital role in sustaining daily household needs, particularly among low-income families who rely on owning or renting Bajaj units as their primary means of earning a living. The study is conducted to highlight how this sector continues to absorb labor and provide income despite operating under informal and often precarious conditions. Consequently, the persistence of Bajaj driving underscores its importance as a socioeconomic safety net, even amid ongoing structural and institutional challenges in urban transport systems (Omar et al., 2023).

However, despite its importance as a source of livelihood, sustaining a stable income in the Bajaj sector has become increasingly difficult. This study also explores the economic pressures drivers face that threaten the long-term viability of their work. High rental fees for Bajaj units, rising fuel costs, and fluctuating passenger demand often compel drivers to work extended hours to meet daily expenses and rental obligations. As a result, drivers experience heightened physical exhaustion, increased exposure to health risks, and persistent financial insecurity. These conditions illustrate how income instability remains a defining feature of Bajaj driving and why targeted interventions are necessary to improve drivers' economic resilience in the sector (Omar et al., 2022). The pressures faced by Bajaj drivers are further intensified in rapidly modernizing cities undergoing significant urban transport transformations. This study further examines how technological advancements and platform-based transport services affect traditional modes of mobility.

In Jakarta, for example, the rapid expansion of ride-hailing applications has significantly reduced passenger demand for Bajaj services, leading to lower daily earnings and longer waiting times between trips. This shift has intensified competition within the urban transport market and placed traditional drivers at a disadvantage. Ultimately, these developments highlight the need for adaptive and inclusive transport policies that recognize technological change while also protecting the livelihoods of traditional transport workers who remain essential to urban mobility systems (The Jakarta Post, 2024).

Building further on technological changes in the transport sector, this study examines how emerging digital initiatives are gradually reshaping the financial practices of Bajaj drivers. In particular, mobile payment systems are increasingly being introduced as alternatives to cash-based transactions, with the potential to improve income security and reduce risks associated with cash handling. In Jakarta, recent studies indicate that while digital payments could offer safer, more transparent, and more stable financial transactions, adoption among Bajaj drivers remains limited. This study is conducted to understand the barriers that hinder wider adoption, including limited access to smartphones, transaction-related costs, unreliable internet connectivity, and low levels of digital literacy among drivers. Consequently, despite the promised benefits of digitalization, many drivers continue to rely on traditional cash systems, highlighting the uneven pace of technological integration within informal transport sectors (Putra, 2025).

In addition to these recent findings, earlier research highlights the potential of digital payment systems to enhance financial inclusion for Bajaj drivers when appropriate support mechanisms are in place. This study further explores how digital platforms could enable drivers to access formal financial services, such as savings accounts, credit facilities, and insurance products, which are often unavailable to informal workers. By facilitating better financial record-keeping and transaction histories, digital systems may help drivers build financial credibility and achieve greater economic stability. However, realizing these benefits depends on the availability of targeted training programs, affordable digital infrastructure, and supportive policy frameworks. Thus, addressing these gaps is essential for ensuring that technological innovations translate

into meaningful improvements in drivers' livelihoods (PEAK-Urban, 2021).

Beyond financial systems, safety and regulatory compliance continue to present significant challenges for Bajaj drivers across different urban contexts. This study also examines the factors contributing to road safety risks within the Bajaj sector, with particular attention to driver-related characteristics. An observational study conducted in Mogadishu identified variables such as driver age, experience level, and adherence to traffic rules as major contributors to road accidents. These findings underscore the need for targeted safety training, stricter enforcement of traffic regulations, and driver education programs tailored to the realities of informal transport work. Ultimately, improving safety outcomes is critical not only for protecting drivers and passengers but also for enhancing the overall sustainability and legitimacy of Bajaj operations within urban transport systems (Mohamed et al., 2022).

At the same time, legal and regulatory challenges further complicate the working conditions of Bajaj drivers operating within informal transport systems. This study examines how regulatory requirements, while intended to promote safety and order, often create additional vulnerabilities for drivers who lack the resources to comply fully. Although Bajaj drivers contribute significantly to local economies by supporting daily mobility and commerce, many struggle to meet permit requirements, franchise fees, and regulatory standards imposed by local authorities. The study is conducted to highlight how these barriers expose drivers to fines, apprehension, and harassment, which in turn encourage unsafe operating practices such as avoiding inspections or working in unauthorized areas.

Consequently, these regulatory pressures undermine both driver welfare and public safety, revealing the need for more inclusive and realistic regulatory frameworks that account for the conditions of informal transport workers (Omar et al., 2022). Moreover, extended working hours significantly increase drivers' exposure to personal security risks, particularly in urban environments with limited law enforcement presence. This study also explores the occupational hazards associated with prolonged shifts, including heightened vulnerability to theft, assault, and other forms of crime. Research indicates that Bajaj drivers who work long or late-night hours are especially at risk, as fatigue reduces alertness and limits their ability to respond to dangerous situations. As a result, concerns over personal safety add another layer of stress to an already demanding occupation, reinforcing the need for improved workplace safety policies, community-based protection mechanisms, and stronger institutional support within the informal transport sector (Hassan, 2022). In response to these demanding legal, economic, and safety conditions, Bajaj drivers have developed various coping strategies to manage both physical strain and emotional stress. This study examines how drivers actively adapt to the pressures of long working hours, low and unstable wages, traffic congestion, and exposure to pollution. These challenges often contribute to chronic exhaustion, anxiety, and declining well-being, yet drivers continue to find ways to remain productive to meet daily financial obligations. The study is conducted to emphasize driver agency and resilience, showing how informal workers are not merely passive victims of structural constraints but actively employ strategies to sustain their livelihoods under persistent pressure (Morm et al., 2022).

To reduce physical fatigue, many Bajaj drivers adopt practical self-care strategies during their workday. This study further explores how drivers use short rest breaks during idle periods, engage in light stretching, and maintain hydration to prevent muscle pain, dehydration, and extreme exhaustion. Although these practices are simple, they play an important role in helping drivers cope with the physically demanding nature of their work. By managing their physical health through these informal methods, drivers are better able to endure long hours on the road, highlighting the importance of health-conscious behaviors in sustaining productivity within the informal transport sector (Rahman & Chowdhury, 2020). Similarly, Bajaj drivers rely on mental and emotional coping mechanisms to deal with the psychological stress associated with their occupation.

This study examines how drivers maintain emotional balance and focus despite constant exposure to financial uncertainty, traffic pressure, and regulatory threats. Common strategies include listening to music while waiting for passengers, socializing with fellow drivers to share experiences, and cultivating a positive mindset grounded in patience and perseverance. These practices help reduce stress, prevent burnout, and foster a sense of community among drivers, enabling them to continue working despite persistent challenges (Singh & Rani, 2021).

Notably, the resilience of Bajaj drivers is further reflected in the increasing participation of women in the sector. This study also examines gender dynamics within informal transport work, particularly in traditionally male-dominated environments. In Jakarta, female Bajaj drivers are increasingly entering the industry, demonstrating determination and adaptability as they support their families despite unstable incomes, long working hours, and heavy traffic. Their growing presence challenges existing gender norms and highlights the evolving social landscape of urban transport labor, underscoring the need for gender-sensitive policies that ensure safety, inclusion, and equal opportunities within the Bajaj sector (Al Jazeera, 2024). Alongside social and labor changes, mobility analysts and industry commentators have increasingly highlighted how emerging transport trends are likely to impact Bajaj drivers in Indonesia. This study examines the potential effects of national electrification initiatives on informal transport operators, focusing on how policy-driven shifts reshape access, costs, and operational practices.

During Indonesia's electric vehicle (EV) adoption initiatives in 2022, analysts observed that the government's push toward electrification represents a significant transformation in urban mobility. These changes are expected to influence drivers' operating costs, vehicle acquisition options, and funding mechanisms for electric Bajaj units. The study is conducted to understand how such policy-driven transitions may affect informal transport livelihoods, emphasizing that large-scale mobility reforms extend beyond infrastructure to directly impact drivers' financial stability and work practices (RideApart, 2022).

Similarly, industry consultants and policy researchers have noted that Bajaj drivers in India are experiencing rapid transformation due to the expansion of electric mobility. This study explores the implications of electrification on driver livelihoods, regulatory compliance, and the overall economic environment for three-wheeler operators. In 2023, national efforts to scale up electric three-wheelers were identified as a turning point in urban transport, with potential benefits including reduced fuel costs and lower emissions, alongside challenges such as higher upfront vehicle prices and the need to adapt to new technology. These developments highlight how electrification is redefining the economic and operational landscape for Bajaj drivers, requiring adjustments in financial planning, route strategies, and maintenance practices to sustain income under evolving conditions (Bain & Company, 2023).

From a broader sustainability perspective, transport researchers have emphasized that Bajaj drivers across developing urban regions are confronting evolving challenges as electrification accelerates globally. This study further investigates the long-term implications of adopting electric Bajajs for drivers' livelihoods, household incomes, and access to sustainable transport options. As electric units become more prevalent, drivers may experience changes in income stability, vehicle maintenance requirements, and the availability of financial or governmental support for fleet transitions. These developments illustrate that the shift toward electric mobility has the potential to transform not only the technological composition of urban transport systems but also the social and economic viability of informal transport livelihoods, underlining the need for policies that balance sustainability with worker protection (Arthur Small, 2023).

In cities like Mogadishu, Bajaj drivers play a critical role in sustaining urban mobility, with roughly 35,000 vehicles operating across the city. This study further explores the sector's structural and institutional

vulnerabilities, particularly the consequences of operating in an unregulated environment. Despite their essential contribution to urban transport, many drivers work without formal contracts, standardized training, or access to social benefits, and an estimated 60–70% remain unlicensed. The lack of formal recognition exposes drivers to legal and financial risks. It limits their access to protections and support mechanisms, underscoring the need for stronger oversight, training programs, and policies to safeguard the rights of informal transport workers (Mohamed, 2022).

Beyond these systemic and structural challenges, the everyday reality of driving a Bajaj often remains overlooked in urban transport research. This study examines the socioeconomic and occupational conditions faced by drivers in smaller towns, where informal transport plays a critical role in sustaining local mobility and livelihoods. In towns such as Hnahthial, Bajaj drivers frequently come from lower-middle-class backgrounds and struggle to make ends meet, contending with low fares, inconsistent income, and poor road conditions. The study is conducted to highlight how these factors make the work both physically demanding and financially precarious. Additional burdens, such as frequent vehicle damage, repair costs, low job satisfaction, and minimal social recognition, further exacerbate the challenges of this occupation. Despite their essential contribution to local communities, Bajaj drivers often operate under physically taxing, economically unstable, and socially undervalued conditions, underscoring the urgent need for greater awareness, institutional support, and inclusive policies to safeguard these essential urban workers (Dr. Lalnunmawia et al., 2023).

Prolonged sitting and long working hours pose serious health risks for Bajaj drivers, particularly those navigating congested urban areas and spending much of their day stuck in traffic. This study examines the occupational health challenges faced by drivers, focusing on how physical strain, long shifts, and income pressures intersect to affect well-being. Research indicates that younger drivers, aged 15–20, who often have limited literacy, may work between 9 and 16 hours daily and experience a range of health issues, including back pain, hand and body pain, skin conditions, and hearing loss. The study is conducted to highlight how these physical challenges, coupled with stressful driving conditions and occasional confrontations with passengers, can contribute to road rage and other behavioral risks, emphasizing the demanding nature of Bajaj driving as a livelihood (Raza et al., 2024).

Additionally, research shows that unsafe driving behaviors, such as speeding, remain prevalent among Bajaj drivers, further exacerbating occupational and public safety risks. Studies indicate that over half of drivers travel between 50 and 69 km/h, speeds that significantly increase the likelihood of traffic accidents. Drivers operating within this range are estimated to be 19 times more likely to be involved in a crash compared to those adhering to safer speed limits. This study is conducted to emphasize the urgent need for clear policies on road safety, professional licensing, and targeted driver training programs, which are essential to protect both Bajaj drivers and passengers while promoting safer and more sustainable urban mobility (Osman et al., 2022).

This literature is important for our study as it provides a detailed understanding of the various roles these drivers play in urban transport and local economies. It highlights the economic opportunities Bajaj driving offers, such as generating income and creating employment, while also addressing the challenges faced by drivers, including regulatory issues, health concerns, and competition from other transport options. The studies together emphasize Bajaj's reliability and flexibility as a mode of transportation, especially in densely populated areas, and reveal the socio-economic factors that influence drivers' livelihoods. Additionally, the literature stresses the need for formal recognition and supportive policies to improve drivers' financial stability and working conditions, making it essential for our examination of both the opportunities and challenges in the Bajaj driving experience.

Theoretical/Conceptual Framework

This study was anchored on Maslow's Hierarchy of Needs (1943), which together provides a comprehensive understanding of the opportunities and challenges experienced by Bajaj drivers.

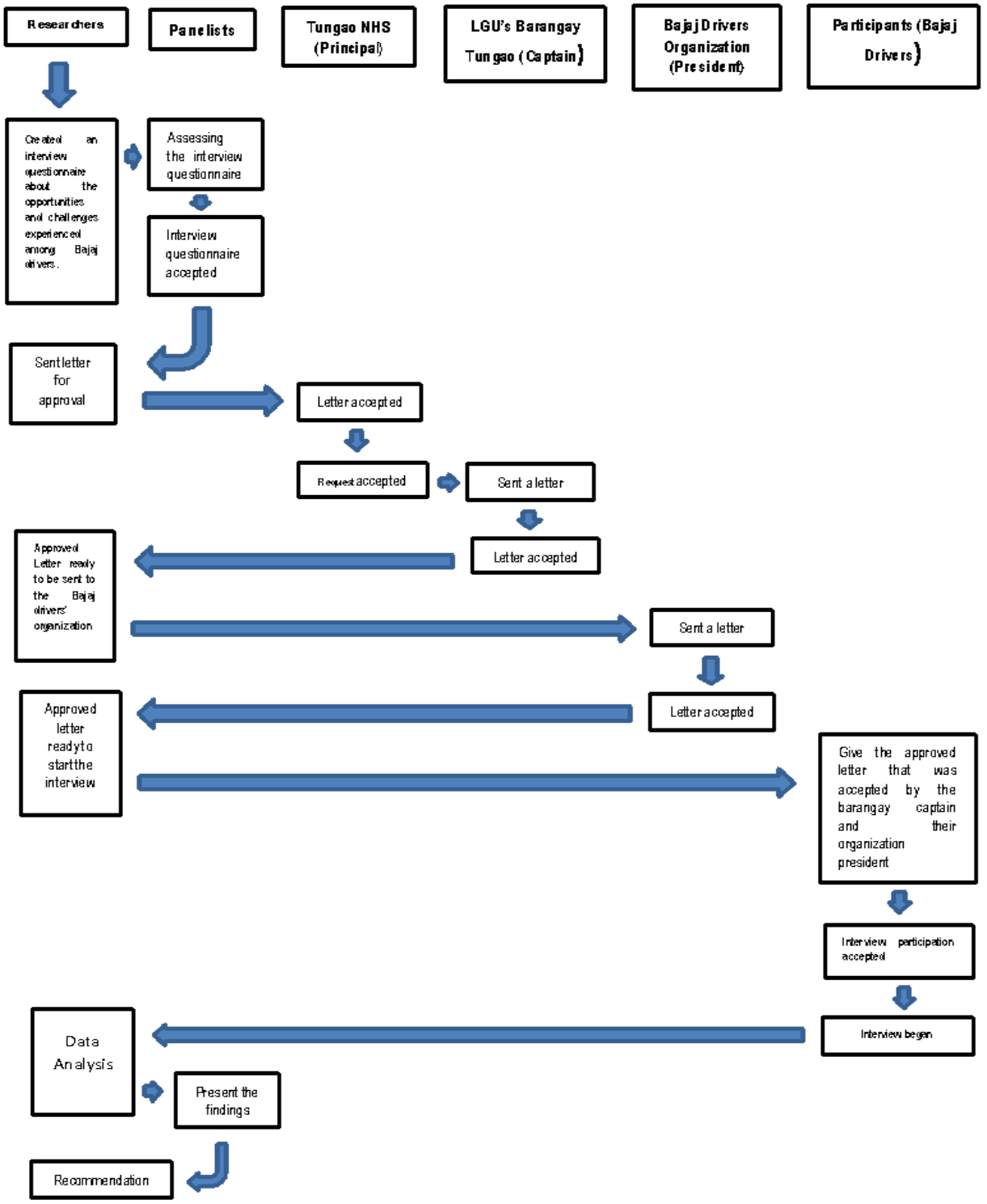
Maslow's theory emphasized that individuals were motivated by a hierarchy of needs ranging from basic physiological requirements to self-actualization. For Bajaj drivers, their occupation primarily addresses physiological needs through daily income that sustains food, shelter, and fuel expenses. Beyond this, safety needs are sought through job security, protection from accidents, and stable regulatory policies. Social needs were also evident, as drivers built connections with peers and passengers, while esteem needs were satisfied through recognition and independence as self-employed workers. At the highest level, some drivers pursued self-actualization by achieving personal and family aspirations through their livelihood.

Maslow's Hierarchy of Needs is a psychological theory proposed by Abraham Maslow in 1953 that explains that human motivation is based on fulfilling needs in a specific order. This order begins with basic survival needs, physiological needs such as food, water, shelter, sleep, and air. It then moved to the need for safety and security, encompassing personal security, employment, health, and protection from harm. Next, individuals progress to the need for relationships, love, and belonging, such as family, friends, intimacy, and social connections. The need for respect and recognition follows this, esteem needs including self-esteem, achievement, status, and respect from others. The hierarchy culminates in the need for personal growth and self-actualization, including fulfilling one's potential, fostering creativity, solving problems, and becoming the best version of oneself. A key idea of the theory is that lower-level needs must be met before higher-level needs can be addressed, making it widely applicable in education, workplace motivation, healthcare, and social sciences.

Maslow's Hierarchy of Needs was directly relevant to a study exploring the opportunities and challenges experienced among Bajaj drivers because it provided a framework to understand their motivations, struggles, and aspirations by examining how the job meets their physiological needs income for basic survival, safety needs stability and security, love and belonging needs social connection, esteem needs respect and recognition, and self-actualization personal growth and fulfillment, thereby offering a structured lens to identify motivations, barriers, and potential support, which guided policy recommendations such as prioritizing insurance or regulation improvements if drivers struggled at the safety level.

Figure 1 presents the step-by-step scientific inquiry. Each stage builds upon the previous one, ensuring that the study is logical, valid, and credible. It prevented guesswork and provided a structured path from problem identification to practical recommendations.

Figure 1: Swimlane Diagram Showing the Research Flow of the Study



Objectives of the Study

This study sought to answer the following objectives: (1) identify the opportunities experienced by the Bajaj drivers; (2) determine the challenges faced by the Bajaj drivers; (3) determine the coping mechanisms Bajaj drivers employed to manage the challenges they encountered; (4) identify the government support given to the Bajaj drivers; (5) determine the recommendations can be given from the lens of the Bajaj drivers.

Methodology

This study followed a phenomenological qualitative research approach. The research took place in a rural area, specifically Barangay Tungao in Butuan City. There were 10 participants in the study. The participants included owners, renters, and daily renters of Bajaj vehicles, all of whom had at least five years of driving experience in Barangay Tungao, Butuan City, Agusan del Norte, Philippines. Data was collected using interview guides with open-ended questions. In this study, Artificial Intelligence (AI) was used as a digital assistant to help organize data and refine the writing. The data was analyzed through coding and thematic analysis.

Results and Discussion

Problem 1. What are the opportunities experienced by the Bajaj drivers?

Table 1 Opportunities Experienced by Bajaj Drivers

Themes	Code (*Participant*)	Verbatim Responses	English Translation
Economic Opportunities	1	"Mas okay man ang bajaj ni try ko, kay mo income man daw."	Bajaj is better, so I tried it because it supposedly provides income.
	3	"Mas dako pod siyag kita pod. Mo kita pod, maka buhi man pod sa pamilya."	It provides a bigger income. I can earn for my family.
	10	"Nagpalit kog bajaj para manginabuhian, oo panginabuhian man to."	I bought a Bajaj for my livelihood; it is really for earning a living.
	2	"Kay nag retire naman kos akong trabaho, dinaman ko dawaton kay tigulang naman ko."	I already retired from my job, and they will not accept me because I am old.
	5	"Wala koy lain pangitaan."	I have no other source of income.
	8	"Wala nay trabaho nga mo dawat pa nako tungod sakong age."	No one will hire me because of my age.
Service and Job Opportunities	3	"Mo kita pod, maka buhi man pod sa pamilya."	I can earn and support my family.
	8	"Para nga mabuhi akong mga pamilya."	So that my family can live.
	4	"Aron maka serbisyo sa mga commuters."	To be able to serve commuters.
	9	"Para maka serbisyo pod sa katawhan."	To be able to serve the people.
	6	"May ning Bajaj Driver way amo."	Driving a Bajaj is good because there is no boss.

Personal Opportunities	5	"Kaantigo man ko ug drive, naa koy lisensya, try ko ug drive bajaj."	I know how to drive and have a license, so I tried driving a Bajaj.
	7	"Mao man akong talent, driver."	Driving is my talent.
	9	"Hatod-sundo nako ang akong asawa, sa buntag hapon."	I can take my wife to and from work every morning and afternoon.
	1	"Dili nako pwede mag focus… mas okay man ang bajaj…"	I can no longer focus on my previous work, so Bajaj is better.

The findings reveal that the opportunities experienced by Bajaj drivers are primarily centered on economic survival, personal adaptability, and community service, with economic opportunities emerging as the most dominant motivation. The responses indicate that becoming a Bajaj driver is largely driven by the need to secure a stable source of income, particularly among individuals with limited access to formal employment.

Participants emphasized that Bajaj driving provides an immediate and accessible livelihood, as reflected in the statement, "Mas okay man ang bajaj… kay mo income man daw," highlighting the occupation's reputation as a reliable source of income. Similarly, another participant noted that the job allows them to support their family, "Mo kita pod, maka buhi man pod sa pamilya," reinforcing the role of this livelihood in sustaining household needs. These findings align with Kedir and Nega (2021), who identified Bajaj transportation as a critical economic opportunity in areas where employment options are scarce.

Moreover, the lack of alternative employment emerged as a key factor influencing participation in the sector. Several respondents pointed out that age and retirement limit their employability, leading them to rely on Bajaj driving as a fallback source of income. This is evident in the response, "Dinaman ko dawaton kay tigulang naman ko," which reflects structural barriers in the labor market. This supports the findings of Dr. Lalnunmawia et al. (2023), who noted that informal transport sectors often absorb individuals excluded from formal employment systems.

Beyond economic motivations, the findings also highlight the importance of personal opportunities, particularly the alignment of the job with drivers' existing skills and circumstances. Participants indicated that their ability to drive and possess a license made it easier to enter the profession, as seen in the statement, "Kaantigo man ko ug drive… try ko ug drive bajaj." This reflects the concept of "diskarte" discussed by Dalisay (2022), in which individuals use available skills to create livelihood opportunities in the informal economy.

Additionally, flexibility and convenience were identified as significant advantages. One participant shared that the job allows them to integrate family responsibilities into their work routine, "Hatod-sundo nako ang akong asawa," demonstrating how the occupation supports both economic and personal needs. This flexibility is consistent with the findings of Mohamed et al. (2022), who emphasized that informal transport work offers adaptable schedules that accommodate personal obligations.

The theme of service and community contribution further underscores the social value of Bajaj drivers. Participants expressed a sense of purpose in serving commuters, as reflected in the statement, "Aron maka serbisyo sa mga commuters." This indicates that drivers perceive their role not only as income-generating but also as a form of community service. This aligns with Manuka et al. (2022), who highlighted the importance of Bajaj transport in improving accessibility and mobility in underserved areas.

Furthermore, job autonomy was identified as an additional opportunity, with drivers appreciating the absence of direct supervision. The response "Way amo" reflects the value placed on independence, consistent with Guduru and Santhanam (2024), who found that autonomy contributes significantly to job satisfaction

among informal and gig workers.

Overall, the findings suggest that while Bajaj driving offers multiple opportunities, these are largely rooted in economic necessity rather than choice. From the perspective of Maslow's Hierarchy of Needs (1943), the occupation primarily addresses physiological and survival needs, particularly food, shelter, and family support. The dominance of these motivations implies that any disruption to this livelihood—such as strict regulation or apprehension—can significantly affect the well-being of the drivers and their families.

Problem 2. What are the challenges faced by the Bajaj drivers?

Table 2 Challenges Faced by Bajaj Drivers

Themes	Code (*Participant*)	Verbatim Responses	English Translation
Legal and Regulatory Challenges	2	"Walay makita kay dakpon man, mag bayad man tag penalty o utang, lukat, impound pagyud impound."	There is no income due to apprehensions; we pay penalties, debts, and redemption fees, and the vehicle is impounded.
	4	"Ma apektohan among kita ug among trabaho... kung wala miy byahe wala man pud miy kita."	Our earnings and work are affected; if we have no trips, we have no income.
	5	"Wa kay makita way pagawaon sa imong pamilya, wa kay suporta sa pag eskwela sa mga bata."	You earn nothing, cannot provide for your family, and cannot support your children's schooling.
	7	"Pag dakopon mi nilag LTO... gutom na among pamilya, napay mga studyante dili maka skwela."	When LTO apprehends us, our family goes hungry, and our children cannot go to school.
	8	"Kining dakop nga impawnon pami sakyanan... likay likay mi kung asa mi mo source ug income."	Because of apprehensions and impounding, we avoid routes to find income.
	9	"Mahal biya kaayo kanang lukat 1,500... dako gyud kaayog gasto."	The ₱1,500 redemption fee is very expensive.
Economic Challenges	3	"Ug walay dakop... wala may mga babag."	If there are no apprehensions, there are no problems.
	6	"Kuan kaning minus pasahero... minus imong kita."	Fewer passengers mean lower income.
	10	"Kanang walay pasahero... dako kaayog epekto kay waman kay income."	Having no passengers has a big effect because you have no income.
	8	"Sa pagkakar….. wala gyud mi maayong inco… nagkatapal-tapal ta pag-eskwelala."	At present, we have no stable income, and our children struggle to pay for school.
Operational and Environmental Challenges	1	"Usahay mapalong ang kuan makina gabie na... mao nay mga kuan nako matag adlaw."	Sometimes the engine stops at night; that is my daily struggle.

The findings reveal that Bajaj drivers face interrelated legal, economic, and operational challenges, with legal and regulatory issues emerging as the most dominant concern. The data clearly show that apprehensions or "dakop" are not only a legal issue but also a primary source of economic instability.

Participants consistently emphasized that apprehensions directly result in loss of income, financial penalties, and disruption of daily livelihood. This is evident in the response, "Walay makita kay dakpon man…", which highlights how enforcement operations immediately eliminate earning opportunities. Similarly, another participant expressed the severity of this impact on family welfare, "Wa kay makita… wa kay suporta sa pag eskwela sa mga bata," indicating that apprehensions extend beyond the driver to affect household survival and children's education.

These findings support the concept of the "Dakop Economy" (Reyes & Cruz, 2024), where informal transport workers operate under constant threat of penalties, creating a cycle of financial vulnerability. The high cost of fines and impoundment, as reflected in "Mahal biya kaayo kanang lukat 1,500…", further reinforces the burden placed on drivers who are already economically constrained. This aligns with Omar et al. (2022), who noted that regulatory non-compliance exposes drivers to financial penalties that threaten their sustainability.

Interestingly, one participant stated, "Ug walay dakop… wala may mga babag," suggesting that apprehensions are perceived as the sole barrier to an otherwise viable livelihood. This reflects a common perspective in informal sectors where regulation is viewed as restrictive rather than protective, consistent with Cervero and Golub (2007).

In addition to legal concerns, economic challenges such as low passenger volume further exacerbate income instability. Drivers reported that fewer passengers directly translates to reduced earnings, as expressed in "minus pasahero, minus imong kita." This highlights the unpredictable nature of demand in informal transport services. Similarly, the absence of passengers results in zero income, underscoring the daily uncertainty drivers face. This finding is supported by Abdullahi and Ismail (2021), who found that fluctuating passenger demand significantly affects the financial stability of transport workers.

Moreover, the intersection between legal and economic challenges becomes more evident when apprehensions lead to prolonged income loss. As one participant shared, "wala gyud mi maayong income… nagka tapal tapal ta pag skwela," indicating that enforcement actions not only reduce income but also disrupt essential family expenditures such as education.

Lastly, operational and environmental challenges, although less frequently mentioned, still contribute to the job's overall difficulty. Mechanical issues, such as engine failure, were identified as daily struggles that interrupt operations and income generation. This aligns with Alemu et al. (2025), who emphasized that vehicle reliability is a critical factor in sustaining transport-based livelihoods.

Overall, the findings suggest that Bajaj drivers operate in a highly precarious environment, where legal pressures intensify economic instability, and operational issues further complicate their situation. From the perspective of Maslow's Hierarchy of Needs (1943), these challenges hinder drivers from achieving safety and financial security, keeping them at the level of basic survival.

The results imply that addressing these challenges requires a shift from punitive enforcement to supportive regulation, particularly through legal recognition and livelihood assistance. Without such interventions, Bajaj drivers will continue to face systemic barriers that threaten both their economic stability and their role in providing essential transport services to the community.

Problem 3. What are the coping mechanisms Bajaj drivers employed to manage the challenges they encountered?

Table 3 Coping Mechanisms Employed by Bajaj Drivers

Themes	Code *(Participant)*	Verbatim Responses	English Translation
Social and Organizational Coping	1	"Mag lisod na biyag daghan na kaayo kay daghan na kaayog kompetensya… ma apektohan gyud mi sa among pamasayro."	It is difficult now because there are many competitors, which affects our ability to get passengers.
	5	"Daghan man mi kaayo… chamba chamba anang makapunit ka sa dalan."	There are many of us; getting passengers is just a matter of luck.
	3	"Naa man mi turno turno, naa mi parking parking."	We have a turn-taking system and designated parking areas.
	8	"Wala man mi nagkumpetensyaay kay groupo man gyud mi."	We do not compete because we function as a group.
	4	"Respeto lang. Respeto."	Just show respect.
	6	"Sige lang sakay… pili lang mga pasahero kung asa mo sakay."	Just continue working; passengers will choose where to ride.
Personal Coping Strategies	10	"Oo molaban, stay positive gihapon."	Keep striving and stay positive.
	7	"Diskarte gyud kas imong kinabuhi… mangita kag lain trabaho."	You must be resourceful in life and look for other sources of income.
	9	"Iyahay nalang paningkamot… diskarte nalang."	We rely on our own effort and resourcefulness.
Time and Family Management	2	"Mag sayo aron dili ka mabilin."	Start early so you will not be left behind.
	4	"Mag drive ra ko kutob 5 pm. Oras na sa pamilya."	I only drive until 5 PM; after that, it is time for my family.
	5	"Pagka gabii sa ila na… expected naa na ko sa balay."	At night, I dedicate my time to my family and go home early.
	6	"Pagka 5 PM undang gyud ko… makapahulay ug makauban ang pamilya."	I stop at 5 PM to rest and spend time with my family.
	8	"Sa hapon mo uli gyud ko… aron maubanan nako ang mga bata."	I go home in the afternoon to be with my children.
	1	"Magluto kog sud-an… hatod sa eskwelahan…"	I prepare food and bring my child to school before working.
	3	"Ihatod akong anak… sunduon pod nako."	I take my child to school and fetch them afterward.
Financial Coping Strategies	2	"Mag drive ragyud ko lubos."	I focus entirely on driving.
	3	"Daily nga ipon… mag andam ka kada adlaw para sa maintenance."	Save money daily to prepare for maintenance expenses.
	4	"Mag tipid… mag gahin kada adlaw para maintenance."	Practice saving and set aside money daily for maintenance.
	5	"Mag save mi kada adlaw… para sa oil ug maintenance."	We save daily for oil and maintenance needs.
	7	"Mag budget gyud ka para sa imong pamilya ug gasolina."	You need to budget for your family and fuel expenses.
	1	"Dili magpadagan kung walay	Do not drive without

		pasahero… para dili gansi."	passengers to avoid losses.
	2	"Dili mag suroy-suroy… sa pamasahero lang gyud."	Do not roam; focus only on passenger routes.
	8	"Magtipid sa gasolina."	Save on fuel.
	6	"Dili mag inom… para sa pamilya ug maintenance."	Avoid unnecessary expenses, such as drinking; prioritize family needs.
	5	"Importante gyud ang oil… para mulahutay ang makina."	Oil maintenance is important to keep the vehicle running.
	7	"Mangita kag lain trabaho… sideline."	Look for other jobs or sideline income.
	5	"Mag ampo ra gyud ta."	We rely on prayer.
Survival-Based Coping Mechanisms	6	"Mangutang para masulbad… unya tigumon."	Borrow money and repay it gradually.
	8	"Dili sa mag byahe aron dili madakpan."	Temporarily stop working to avoid apprehension.
	9	"Mangitag pamaagi para ma solbad."	Find ways to solve the problem.

The findings reveal that Bajaj drivers employ a wide range of coping mechanisms that are multi-dimensional, adaptive, and largely self-reliant, reflecting the realities of working within an informal and unstable transport sector. These coping strategies can be categorized into social, personal, financial, and survival-based approaches, all of which help sustain their livelihoods despite persistent challenges.

A notable finding is the presence of dual perceptions of competition, where some drivers view it as a significant challenge. In contrast, others mitigate it through collective systems such as turn-taking and group coordination. Participants expressed that increasing competition reduces their chances of securing passengers, as reflected in the statement, "Daghan na kaayo… ma apektohan gyud mi sa among pamasayro." However, others emphasized the role of cooperation, stating "Naa man mi turno turno," indicating the presence of informal organizational structures that regulate competition. This aligns with Mohamed and Jama (2020), who highlighted that social organization and cooperation are essential for maintaining stability in informal transport systems.

At the individual level, personal coping strategies play a crucial role, particularly through maintaining a positive attitude, persistence, and respect. The statement, "Respeto lang," reflects the importance of interpersonal behavior in managing conflicts and sustaining daily operations. Additionally, the concept of "diskarte" (resourcefulness) emerged as a key coping mechanism, where drivers rely on their own initiative to secure income, as seen in "Diskarte gyud kas imong kinabuhi." This finding supports Dalisay (2022), who described "diskarte" as a fundamental survival strategy in the Filipino informal economy.

Another significant coping mechanism is time and family management, in which drivers deliberately structure their work schedules to balance livelihood needs and family responsibilities. Many participants reported stopping work early to spend time with their families, as reflected in "Mag drive ra ko kutob 5 pm. Oras na sa pamilya." This indicates that despite economic pressures, drivers prioritize their social roles as family members. This finding is consistent with Morm et al. (2022), which emphasized that flexible work arrangements in informal sectors enable individuals to maintain family responsibilities.

In terms of financial coping, drivers demonstrate strong budgeting and cost-management practices, including daily savings, fuel conservation, and the minimization of unnecessary expenses. Statements such as "Daily nga ipon" and "Magtipid sa gasolina" highlight their efforts to manage limited resources effectively.

These strategies align with Abdullahi and Ismail (2021), who noted that transport workers adjust their operational behavior to cope with fluctuating fuel costs and unstable income.

Finally, survival-based coping mechanisms such as borrowing money, seeking alternative income sources, relying on prayer, and temporarily stopping work reveal the depth of vulnerability experienced by drivers. The response, "Mangutang para masulbad," illustrates reliance on informal financial support systems, while "Dili sa mag byahe aron dili madakpan" shows how drivers adapt to avoid regulatory risks. These findings support Omar et al. (2023), who emphasized that informal workers often depend on loans, social networks, and adaptive strategies to cope with economic instability.

Overall, the results indicate that Bajaj drivers are highly resilient and resourceful, employing both proactive and reactive strategies to manage their challenges. However, these coping mechanisms remain largely individualized and informal, reflecting the absence of structured institutional support. From the perspective of Maslow's Hierarchy of Needs (1943), these strategies are primarily focused on meeting physiological and safety needs, with limited opportunities for long-term security and advancement.

The findings suggest that while drivers can adapt to difficult conditions, sustainable improvement requires external support, particularly through policies that address financial instability, legal recognition, and access to formal assistance programs.

Problem 4. Is there any government support for Bajaj drivers?

Table 4 Government Support Experienced by Bajaj Drivers

Themes	Code *(Participant)*	Verbatim Responses	English Translation
Perceived Importance of Their Role	2	"Oh, importante kay nag serbisyo man ka para sa pasayro."	Yes, it is important because we provide service to passengers.
	4	"Oh, kay aron maka serbisyo mi sa commuters sa diri sa barangay Tungao."	Yes, so we can serve commuters in Barangay Tungao.
	6	"Wala man tay laing trabaho Bajaj ra gyud kay naay mga commuters."	We have no other job; Bajaj driving is what we do because commuters need it.
	8	"Ang Tungao kinahanglan ug mga sakyanan… kinahanglan ug serbisyo."	Tungao needs vehicles and proper transport service.
	10	"Oo, importante kaayo."	Yes, it is very important.
	1	"Mga estudyante ug trabahante gabii na… kami ra gyud ang pwede."	Students and workers go home late; we are the only available transport.
	3	"Kulang ug jeep… gamit mi sa mga tao."	There is a lack of jeepneys, so people rely on us.
	5	"Kulang gyud ta ug transportasyon…"	There is really a shortage of transportation.
Requested Government Support	1	"Kinahanglan gyud mi nga naa gyud miy permit… tagaan mi ug franchise."	We really need a permit or franchise.
	2	"Matagaan mig permit sa gobyerno… franchise."	The government should give us a permit or franchise.
	4	"Permit ang gikinahanglan namo."	A permit is what we need.

	5	"Tagaan nalang mi ug permit… bisan temporary permit."	We are requesting a permit, even if it is just temporary.
	6	"Permit."	Permit.
	8	"Tagaan ug franchise."	To be given a franchise.
	10	"Tagaan ug franchise."	To be given a franchise.
Expected Outcomes of Support	2	"Para dili mi dakpon… makalusot nami."	So we will not be apprehended and can operate freely.
	4	"Wala namay mahimong dakop."	There will be no more apprehensions.
	5	"Wala kay lain huna-hunaon… libre ka mosulod."	You will have no worries and can travel freely.
	6	"Wala na dakop…"	There will be no more apprehensions.
	10	"Dili naman dakpon."	We will no longer be apprehended.
	6	"Dako kaayo tabang… pamilya ipakaon."	It would be a big help in feeding the family.
	7	"Makatabang sa pamilya…"	It would greatly help our family.
Lack of Government Support	4	"Programa? Wala."	Program? None.
	6	"Sa karun wala."	For now, there is none.
	8	"Wala man…"	There is none.
	10	"Murag wala."	It seems there is none.
	1	"Murag gi duot mig maayo…"	It feels like we are being oppressed.
	7	"Murag nagpaka buta bungol ang gobyerno…"	It feels like the government is ignoring us.
	9	"Wala gyud… kasakit noon."	There is really none; it is painful.
Limited / Inaccessible Support	3	"Kadto lang sauna… tupad."	Only through a TUPAD program.
	5	"Naay cooperative pero wala mi kaapil…"	There was a cooperative, but we were not included.

The findings reveal a clear disconnect between the perceived importance of Bajaj drivers and the level of government support they receive, highlighting institutional neglect and regulatory insecurity.

Drivers strongly perceive their role as essential in providing transportation services, particularly in areas where formal transport systems are insufficient. This is evident in statements such as "Kami ra gyud ang pwede," which emphasizes that Bajaj drivers often serve as the only available mode of transport, especially at night and in emergencies. Similarly, participants highlighted the shortage of jeepneys, reinforcing their role in filling critical transportation gaps. These findings align with Kedir and Nega (2021) and Mohamed et al. (2022), who emphasized that Bajaj services are vital in improving accessibility and mobility in underserved communities.

Despite this recognized importance, the most dominant finding is the drivers' strong and unified demand for government support, particularly in the form of permits or franchises. Participants repeatedly expressed that legal recognition is their primary need, as reflected in "Permit ang gikinahanglan namo." This indicates that the core issue faced by drivers is not merely economic, but legal insecurity, which directly affects their ability to operate. This supports Hassan (2022) and Omar et al. (2022), who found that the lack of regulatory compliance exposes informal transport workers to penalties and instability.

Furthermore, drivers identified the primary benefit of government support as the elimination of apprehensions, which they perceive as the root cause of their livelihood challenges. Statements such as "Para dili mi dakpon" highlight that drivers associate government intervention with freedom from enforcement

and with income stability. This suggests that current policies are viewed as punitive rather than supportive, creating fear among drivers rather than protection.

However, the most critical finding is that the majority of participants reported no government support at all. Responses such as "Programa? Wala" and "Murag wala" indicate a complete absence of assistance programs. More concerning are expressions of perceived neglect and marginalization, such as "Murag nag paka buta bungol ang gobyerno," suggesting that drivers feel ignored by authorities. This reflects a deeper issue of institutional disconnection, which may contribute to distrust in governance. This aligns with Bajaj et al. (2023), who noted that informal transport workers often experience marginalization due to a lack of structured support.

Additionally, some participants mentioned limited or inaccessible support, such as past inclusion in the TUPAD program or cooperative initiatives. However, these were described as inconsistent and difficult to access, often due to procedural barriers. The statement, "Wala mi kaapil," highlights how even available programs fail to reach all drivers. This supports Mohamed et al. (2022), who emphasized that formalization efforts must be inclusive to be effective.

From the perspective of Maslow's Hierarchy of Needs (1943), the absence of government support directly affects the drivers' safety and security needs, as they continue to operate under constant threat of apprehension and income loss. Without institutional backing, drivers remain vulnerable despite their essential role in the community.

Overall, the findings suggest that Bajaj drivers are essential yet unsupported stakeholders in the local transport system. The results strongly indicate the need to shift from enforcement-based governance to inclusive, supportive policies, particularly through legal recognition, access to assistance programs, and integration into the formal transport sector. Such interventions would not only improve the drivers' livelihood but also enhance the overall efficiency and accessibility of transportation services in the community.

Problem 5. Based on the findings of the study, from the lens of the Bajaj drivers, what recommendations can be given?

Table 5 Recommendations from Bajaj Drivers

Themes	Code *(Participant)*	Verbatim Responses	English Translation
Warnings and Discouragement	2	"Dili sa sila mag drive-drive kay sa pagka karon wala pay permit."	They should not drive for now because they do not have a permit yet.
	3	"Nah, sa karon dili na lang mo apil kay lagi sa dakop-dakop nya labad kayo."	For now, do not join because of apprehensions—it is very troublesome.
	4	"Di nalang sila mo padayun kay aron dili sila madakpan."	They should not continue, so they will not be apprehended.
	10	"Tambagan na dakop raba…"	Advise them because they might get apprehended.
Financial Risk Awareness	1	"Kung mo utang sila… naa gyuy posibilidad nga maglisod gyud sila… lugi lugi…"	If they take out loans, they may struggle and incur losses.
	2	"Labinag utang ilang bajaj… mag	Especially if the Bajaj is loaned,

		lisod ug bayad…"	they will have difficulty paying.
Cautious Entry Strategy	1	"Sa mga bag-o… maniid sa sila ba unsay dagan."	Newcomers should first observe the situation before entering.
Safety Practices	6	"Dili mag inom mo drive…"	Do not drink and drive.
	7	"Mag amping gyud ka… dili ra isa ang imong gi dala nga kinabuhi."	Be very careful because you are responsible for passengers' lives.
	8	"Hinay hinay… dili mag overtake…"	Drive slowly and avoid overtaking to prevent accidents.
Professional Conduct	5	"Pasensya sa pag pasahero… dili tanan mangsahero."	Be patient with passengers because not all are easy to deal with.
	9	"Dili magpasubra ug sukot sa pasahero…"	Do not overcharge passengers.
Legal Compliance	8	"Dala pod lisensya."	Always bring your driver's license.
	5	"Naa koy lisensya… mao nag try ko ug drive."	I have a license, so I was able to drive a Bajaj.

The findings reveal that the recommendations provided by Bajaj drivers reflect a dual perspective of caution and professional responsibility, shaped by their lived experiences in a highly unstable and informal transport environment. These recommendations emphasize both the risks associated with entering the sector and the behaviors necessary to sustain a livelihood within it.

A dominant theme is warnings and discouragement, particularly stemming from apprehensions and a lack of permits. Drivers strongly advised potential entrants to avoid joining the sector under current conditions, as reflected in the statement, "Dili na lang mo apil kay lagi sa dakop-dakop," indicating that regulatory enforcement creates a highly risky environment. This suggests that the profession is perceived as legally vulnerable and economically unstable, where participation may lead to financial loss rather than gain. This finding supports Omar et al. (2022), who noted that informal transport workers often face legal uncertainties that significantly affect their income stability.

Closely related to this is the theme of financial risk awareness, where drivers highlighted the dangers of acquiring Bajaj units through loans. Participants warned that debt, combined with the risk of apprehension, may lead to financial hardship, as expressed in "naa gyuy posibilidad nga maglisod gyud sila." This reflects the compounded vulnerability experienced by drivers, where economic and regulatory risks intersect. This aligns with Abdullahi and Ismail (2021), who emphasized that unstable income and operational risks increase financial insecurity in informal transport sectors.

Another important recommendation is to adopt a cautious entry strategy, in which potential drivers are advised to observe the situation before committing. This reflects an awareness of the sector's dynamic and uncertain nature, suggesting that entry into the profession requires careful consideration rather than immediate participation.

On the other hand, drivers also emphasized professional and safety practices as essential for sustaining their livelihood. The importance of safe driving is strongly highlighted, particularly in statements such as "mag amping gyud ka," which underscores the responsibility of drivers for the safety of their passengers. This aligns with Clean Air Asia (2021), which emphasized that adherence to safety practices is crucial in informal transport systems to reduce accidents and ensure reliability.

Furthermore, maintaining professional conduct, including patience and fair pricing, was identified as an

important factor in building trust with passengers. The statement "dili magpasubra ug sukot" reflects drivers' awareness of ethical practices as a means of sustaining long-term income. This indicates that, despite operating informally, drivers still adhere to self-imposed professional standards.

Lastly, legal compliance, particularly possessing a driver's license, was emphasized as a basic requirement. While drivers lack formal franchise recognition, they still recognize the importance of complying with individual legal requirements, suggesting an inclination toward partial formalization.

From the perspective of Maslow's Hierarchy of Needs (1943), these recommendations reflect a strong focus on securing safety and survival needs, both by avoiding legal risks and by ensuring a stable income. However, the prevalence of discouragement suggests that the current system limits opportunities to achieve long-term security and stability.

Overall, the findings suggest that Bajaj drivers operate within a risk-intensive livelihood system, where success depends on a combination of caution, discipline, and adaptability. Their recommendations highlight the urgent need for government intervention, particularly in providing legal recognition and support mechanisms. Without such measures, the sector will remain uncertain, discouraging potential entrants and perpetuating the cycle of vulnerability among existing drivers.

Conclusions

Based on the findings of the study, the following conclusions are drawn:

1. Bajaj drivers do their jobs to make a living, but they also provide an important service to the community by making transportation readily available.

2. The lack of legal franchises remains the most consequential challenge faced by the Bajaj drivers, preventing them from operating legally and creating uncertainty in their livelihood.

3. There is a notable lack of government support for the drivers, as most of them have not received assistance or are unaware of any existing programs intended to help them.

4. Bajaj drivers prefer a more supportive approach from authorities, advocating for legalization measures such as the issuance of local franchises or special permits instead of purely punitive enforcement.

Recommendations

Based on the study's findings and conclusions, the following recommendations are presented. These recommendations have been enhanced to incorporate all stakeholders identified in the Significance of the Study and to include specific advice from the participants' lived experiences.

Department of the Interior and Local Government (DILG). They may collaborate with local authorities to ensure road use is both safe and efficient, while maintaining fair monitoring as a key objective. Focusing local ordinances on integrating Bajaj vehicles into the broader transport network, rather than relying solely on punishment, supports the local economy. This oversight helps maintain order while respecting the economic contributions of informal transport workers.

Land Transportation Franchising and Regulatory Board (LTFRB). They may enhance guidelines on route assignments and franchising policies to accommodate better the operational realities of three-wheeled vehicles in rural areas. Establishing a clear and formal framework helps eliminate financial instability caused

by inconsistent enforcement. Such regulation promotes a fair operating field for both transport operators and the passengers they serve.

Local Government Units (LGUs). They shall encourage the transition of Bajaj operations to a legitimate status by granting provisional permits or localized franchises, which provide a path toward formalization. Developing ordinances that shift away from purely punitive measures toward a supportive regulatory framework helps protect drivers' livelihoods. This approach facilitates a safer and more organized transport system for the commuting public.

Non-Governmental Organizations (NGOs) and Community Groups. They can design support programs, such as financial literacy and health initiatives tailored to the specific needs of Bajaj drivers, which provide essential social protection. These organizations can act as bridge builders between the informal transport sector and government institutions to facilitate clearer communication. Their involvement is instrumental in advocating for the rights and long-term welfare of drivers and their families.

Commuters. They shall actively support the transition toward a regulated service by adhering to standardized fare matrices and providing constructive feedback through official channels. Beyond mere patronage, passengers can advocate for the formalization of Bajaj services by documenting and highlighting the drivers' vital role, particularly as "first responders" during late-night medical emergencies when traditional transport is unavailable. By fostering a culture of mutual respect rather than a purely transactional relationship, commuters help justify the need for safer, more reliable, and officially recognized transport options that benefit the entire community's mobility and safety.

Bajaj Drivers. They shall prioritize safe driving practices and avoid reckless behavior to maintain community trust and passenger safety. Formalizing their status by obtaining valid professional driver's licenses is a practical step to mitigate legal risks. Furthermore, adopting robust financial habits, such as setting aside a fixed daily amount for long-term vehicle maintenance, supports the sustainability of their livelihood.

Future Researchers. They may expand on this study through longitudinal or quantitative investigations, which allow for the measurement of the economic impact of formalizing the Bajaj sector. Exploring the environmental implications of these vehicles within rural transport networks offers further academic insight. Investigating the potential to transition to more sustainable energy sources contributes to the broader fields of transportation and environmental studies.

Declaration of Conflicting Interests

The authors declare no potential conflicts of interest with respect to the research, authorship and publication of this article.

Funding

The author received no financial support for the research, authorship and publication of this article.

References

Abdullahi, M. H., & Ismail, A. A. (2021). Socio-economic contribution of Bajaj transport in Mogadishu, Somalia. International Journal of Scientific and Research Publications, 11(7), 452–459. https://doi.org/10.37284/eajis.5.1.756

Abdullhahi, A. A., & Ismail, M. B. (2021). Impact of fuel price fluctuation on the operational costs of informal transport in developing countries. Journal of Transport Economics and Policy, 55(2), 175–190.

Abdullhahi, B. H., & Ismail, K. Y. (2021). The impact of changing fuel costs and competition on the financial stability of Bajaj drivers.

Adhikari, S., Dhakal, S., & Rijal, S. (2023). An overview of informal public transport in Asian cities. Proceedings of the Eastern Asia Society for Transportation Studies, 14. https://easts.info/online/proceedings/vol.14/pdf/PP3787.pdf

Adovas, J. A., Carandang, K. C., Del Rosario, J. M., Embuestro, M. J., Mortifero, J. R., & Espiritu, P. J. (2024). An exploration of bahala na among Filipino jeepney drivers affected by the impending modernization of jeepneys. ResearchGate. https://doi.org/10.13140/RG.2.2.17892.28801

Aglipay, A., & Abad, R. (2025). Jeepney modernization program: Agencies and constraints of the informal transport sector in Cebu City, Philippines. Journal of Global Awareness, 6(1). https://scholar.stjohns.edu/jga/vol6/iss1/8/

Al Jazeera. (2024, March 8). An. An Indonesian single mother makes ends meet by driving an autorickshaw (bajaj). https://www.aljazeera.com

Alemu, Y., Teshome, A., & Mekonnen, S. (2025). Risk factors and epidemiology of lower back pain among Bajaj drivers in Gondar City, Northwestern Ethiopia: A community-based cross-sectional study. BMC Public Health, 25(1), Article 144. https://doi.org/10.1080/10803548.2025.2454141

Amey Joshi et al. (2021). The prevalence of stress, stressors, and coping mechanisms among auto-rickshaw drivers in Bengaluru City, India. Journal of Family Medicine and Primary Care, 9(2), 45–56. https://doi.org/10.4103/jfmpc.jfmpc_2413_20

Aperocho, J., & Villarin, C. (2024). The lived experiences of jeepney drivers in the Philippines: A phenomenological study. Vox Humana: Journal of Social Affairs. https://doi.org/10.56183/vox.v3i2.643

Arthur D. Little. (2023). Unleashing Indonesia's e-mobility potential. https://www.adlittle.com

Asad, M. (2024). Creating an informal transport route. Journal of the American Planning Association, 90(3). https://doi.org/10.1080/01944363.2024.2307920

Aslan, A. D., Hidayat, D., & Kholil, M. (2025). The moderating role of the work environment in the relationship between work-life balance and work stress among gig economy workers. Ilomata International Journal of Management, 6(3). https://doi.org/10.61194/ijjm.v6i3.1551

Bain & Company. (2023). India Electric Vehicle Report 2023. https://www.bain.com

Bajaj, J. S., Kumar, N., Kaushal, R. K., Gururaj, H. L., Flammini, F., & Natarajan, R. (2023). System and method for driver drowsiness detection using behavioral and sensor-based physiological measures. Sensors, 23(3), 1292. https://doi.org/10.3390/s23031292

Bajaj, R., Kumar, A., & Gupta, P. (2023). Challenges and opportunities in the informal transport sector: A socio-economic study of three-wheeled vehicle drivers. Journal of Urban Mobility, 12(4), 154–170.

Bautista, L. (2023). Capital costs and debt traps: The financial precarity of informal transport operators in the Philippines. Journal of Development Economics, 14(2), 45–62.

Briones, L. A. (2024). Barriers to formalization: A study of informal transport cooperatives in the Philippines. Journal of Public Administration and Governance.

Budiyono, A., & Haryono, S. (2024). Measuring job precariousness experienced by Gojek drivers in Indonesia. Journal of Southeast Asian Studies, 55(1), 112–135. https://doi.org/10.54783/jin.v5i2.709

Chalermpong, S., Ratanawaraha, A., & Uchiyama, Y. (2025). Informal and shared mobility: Status, challenges, and opportunities in Southeast Asia. Volvo Research and Educational Foundations. https://vref.se

Chowdhury, A., & Rahman, T. (2020). Challenges faced by auto-rickshaw drivers in Dhaka: A socio-economic perspective. Journal of South Asian Mobility Studies, 4(2), 45–60.

Clean Air Asia. (2021). Vehicle inspection and maintenance systems in Southeast Asia: Current practices and opportunities.

Clean Air Asia. (2021). Regulatory frameworks for low-emission transport in Southeast Asia.

Dalisay, R. M. (2022). Diskarte: Resilience and improvisation in the Filipino informal economy. Ateneo de Manila University Press.

Ellao, J. A., & Vital, E. (2022). It is a hunger spell for Filipino transport drivers as oil prices continue to spike. Bulatlat Journalism for the People. https://www.bulatlat.com

Fianza, D. L. (2023). Marginalization in modernization: The lived experiences of informal transport operators. Journal of Urban Mobility and Development.

Garrido, M., & Lim, J. (2025). Self-regulation as resistance: How informal transport drivers build community legitimacy. Philippine Journal of Transportation Studies, 8(1), 112–130.

Guduru, R., & Santhanam, N. (2024). Work-life balance and gig workers' performance in Indonesia. Crypto: Journal of Computer Information Systems and Cyber Security, 5(1). https://doi.org/10.55927/crypto.v4i1.9

Gutierrez, C. R., & Alonsagay, P. M. (2021). Livelihood resilience among informal workers in the Caraga Region. Philippine Sociological Review, 69(2), 87–102.

Hassan, M. (2022). A descriptive study on driving time and crime events of Bajaj motor tri-cycles in Mogadishu City—East African Journal of Interdisciplinary Studies.

Kedir, M. M., & Nega, A. (2021). Socio-economic impacts of Bajaj transport service on urban households. International Journal of Innovative Science and Research Technology, 6(5), 1484–1492.

Kumar, A., & Sharma, S. (2023). Risk and resilience in informal transport—Journal of Transport Geography, 108, 103567.

Maslow, A. H. (1943). A theory of human motivation. Psychological Review, 50(4), 370–396. https://doi.org/10.1037/h0054346

Maslow, A. H. (1954). Motivation and personality. Harper & Row.

Mohamed, A., & Jama, I. (2020). Impact of auto-rickshaw (Bajaj) in Somaliland—University of Burao Research.

Morm, U., Veng, K. P., & Yat, Y. (2022). Factors affecting the decision to change from a Bajaj driver to other jobs. International Journal of Engineering Advanced Research, 4(3), 153–166.

Omar, A. R., Delos Santos, J. F., & Reyes, C. M. (2023). Financial precarity among transport drivers in Metro Manila. Philippine Journal of Labor and Industrial Relations, 45(1), 1–25.

Omar, H., Yusof, M., & Rahim, A. (2023). Financial stress and coping mechanisms among informal transport workers. Journal of Economic and Social Research.

Oyeniyi, O. J. (2021). Service quality and passengers' loyalty. International Journal of Research in Business and Social Science, 10, 11–20. https://doi.org/10.52589/BJMMS-LRQ7JAVX

Reyes, V., & Cruz, F. (2024). The "Dakop" economy: Institutional precarity and the informal transport sector in Mindanao. Journal of Urban Governance and Policy, 3(4), 21–39.

Tacderas, M. R., & Sunio, V. (2021). Examining the implementation of the Public Utility Vehicle Modernization Program. Philippine Transportation Journal, 4(1), 56–72.

UN-Habitat. (2022). The future of urban mobility in Southeast Asia.

Van Lierop, D., & El-Geneidy, A. (2016). What influences satisfaction in public transport? International Journal of Sustainable Transportation, 10(10), 913–922.

World Bank. (2021). The long shadow of informality: Challenges and policies. https://www.worldbank.org

Acknowledgments

First and foremost, the researchers would like to extend their deepest gratitude to Almighty God for His unwavering blessings, which have guided them throughout their research journey and enabled the successful completion of this work.

Hipolito C. Rosalada Jr., School Principal, for graciously permitting us to conduct the study among Bajaj drivers in Barangay Tungao, Butuan City.

Dr. Rodelio B. Pasion, the chairman of the panel of examiners, for his invaluable teaching skills, remarkable ideas, methods, positive remarks, and corrections in the writing process.

Mr. Eddie S. Mabale, one of the panel members, for his comments, suggestions, advice, and approval.

Javelyn Sanchez, for her amazing ideas and insightful contributions. Their valuable criticisms and constructive feedback were crucial in refining our research study and ensuring its rigor.

Robert Torres, for his time and understanding during the process.

Yumiko M. Supangan for her advice, amazing ideas, approval, and interest in this research.

Ron Cadavez provided invaluable expertise and assistance to the group, generously dedicating time even though the group was not officially assigned to him. His patience, dedication, and support were essential to the successful completion of this study.

Don Atienza, their esteemed subject teacher for Practical Research 2. His clear guidance and strong support were very important for finishing this study.

Chelsea Rose D. Tero, their research adviser, whose kindness, sincerity, and unwavering motivation have profoundly inspired the researchers throughout this process. Her calm guidance kept them focused amidst challenges, and her sincere belief in their potential was the steady force that drove this study to completion. The researchers are eternally grateful for her patience and dedication.

Mrs. Shiela Marie Osin, their class adviser, allocated time from her subject so the researchers could finish and submit the papers by the deadline. Her unwavering support, encouragement, and advice throughout the research process played a vital role in this journey.

The research participants for their cooperation; the president of the BUBODA, Noel Gonzales; and Barangay Tungao, Butuan City, for their willingness to participate in the study, and for granting permission to conduct the research.

A special thank you is extended to the classmates who provided transportation, ensuring the researchers' safe return home. Their invaluable effort is deeply appreciated. The researchers also thank the co-researcher's house that served as the consistent venue for their meetings.

Finally, the researchers extend heartfelt gratitude to their beloved parents. Their boundless love, unwavering prayers, constant care, and steadfast support were the bedrock of their academic journey.