



Karamat Hussain¹, Singay Ali² & Kashif Ali³

¹Bachelor’s Student, Department of Economics, PMAS Arid Agriculture University, Rawalpindi

²Bachelor’s Student, Department of Economics, PMAS Arid Agriculture University, Rawalpindi

³Bachelor’s Student, Department of Business Accounting and Finance, GC University, Lahore

KEYWORDS	ABSTRACT
Skardu-Baltistan, Socioeconomics, Shaghr Thang, Infrastructural Neglect	The study examines socio-economic impacts of infrastructural negligence on the Shahrah-e-Baltistan, an important and a hazardous road network that links Gilgit to Skardu, Pakistan. Using a mixed-methodology, the study integrates quantitative data of 168 participants of survey (supplemented with official fatality statistics of 2000-2025) and the qualitative data of 70 respondents of the in-depth interview and open-ended responses. The study unveils a humanitarian crisis: frequent users are incurring huge losses in finances ($\chi^2 = 16.93, p < 0.001$), hence road-related conditions have led to an increase of 124% in average annual deaths in twenty years. Road closure and loss of skilled professionals are also strongly positively correlated ($p = 0.42, p < 0.001$). This study highlights the overall need of communities to have immediate safety measures (28% prioritize protective barriers & upgradation of existing roads) and long-term solutions (65.4% advocate reconstruction and alternative road Shaghar Thang Road Project), especially tunnels in places of high risk. In this connection, the results conclude that neglect of infrastructure exemplifies regional inequality. Thus, it urges the urgent road rehabilitation and work on alternative routes to secure human costs and socioeconomic stability.
ARTICLE HISTORY	
Date of Submission: 10-08-2025 Date of Acceptance: 14-09-2025 Date of Publication: 16-09-2025	
	 2025 Journal of Social Sciences Development
Corresponding Author	Karamat Hussain
Email:	karamathussain22@yahoo.com
DOI	https://doi.org/10.53664/JSSD/04-03-2025-04-38-51

INTRODUCTION

Shahrah-e-Baltistan, famous for the name of mysterious Skardu road, formerly known as Jaglot-Skardu road or S-1 Strategic Highway, is a one of important 167-kilometer route connecting Gilgit to Skardu in Gilgit-Baltistan, Pakistan. It is considered one of the most dangerous routes in Pakistan because of its close alignment with the mighty Indus River—a violent stream of water. The torrent

of the Indus River makes this road scarier for the world. The City Skardu is located at the juncture of the Indus and Shigar River, sheltered within the Skardu Valley. This exceptional location not only immense its scenic beauty but also underscores its remarkable importance as a hub for tourists in the region. The core importance of the Skardu is an account of its unique location, in the east Ladakh (India), Gilgit is located in the west, Kashmir lies in southeast and specifically the Xinjiang province of China is in the northeast of Baltistan. The Shahrah-e-Baltistan, formerly known as Jaglot-Skardu Road has proven to be a vital economic artery for Gilgit-Baltistan, and Pakistan, facilitating trade, tourism, employment, and infrastructure development (Malik, 2025). From the global perspective, routes and communication networks have long been recognized as prominent in regional development.

According to the World Bank the development of trade and transport corridors, that are strategic routes designed to facilitate movement of goods and people across regions. Economics development concentrates in a “core” region while “peripheral” regions lag due to inadequate infrastructure and investments (Freidmann, 1966), Pakistan’s important areas (e.g., Karachi, Lahore and Islamabad) have established road networks and stronger economies, therein Skardu peripheral regions suffer from neglect and remains disconnected, isolated, crumbling road infrastructure, reinforcing the inequalities. Infrastructure and communication development, especially roads, are a fundamental step in growth of economics modernization and have more opportunities and national integration (Modernization Theory (1950s–60s), Shahrah-e-Baltistan’s underdeveloped infrastructure shows failure to align the region into national development chain, which resists its social, environmental and economic modernization for high risk aversion among investors, and service delivery failures. The importance of Shahrah-e-Baltistan is significant because of its strategic location, which lies at the crossroads of some of the world’s most geopolitically important regions—South Asia, China, as well as Central Asia.

The Skardu Road is critically underdeveloped, unsafe and crumbling, excluded from the global investment attention besides its proximity to the Karakoram Highway (KKH), the shadow of CPEC Pakistan China Economics Corridor and modern silk road channels. Whereas, neighboring routes such as KKH are being revitalized under Multibillion-dollar infrastructure partnerships, Skardu Road shows infrastructural disparity. International investors, Stakeholders, consisting development institutions like Asian Development Bank, World Bank and Chinese investment, have prioritized primary trade corridors neglecting the local feeder roads like Baltistan Routes that are important for inclusive development and regional integration. The inhabitants of Baltistan once relied on this antique route to reach Gilgit and other parts of Pakistan in order to have their livelihood (PAMIR, 2024). The modern designing and reconstruction of the road started in 1968 by the Power and Water Development, PWD, Pakistan. Later, revitalizing, frequent widening by army engineers mainly in 1972. The FWO, the army construction wing, constructed the formal road in 1974 and accomplished mega project in 1984. At that time, road was just 3.6 meters which made it difficult for two vehicles to pass at a time safely.

At the same time tourism in Baltistan was not formally famous, only the adventure travelers were used to visiting in order to explore K2, and other mountains in Baltistan. Over time, the importance

of the Skardu-Baltistan region has been increasing because of scenic beauty, unfolding resources and snowy landscape attracted more foreign and down-town tourists. The number of travelers were rapidly enhanced in Shahrah-e-Baltistan after 2000, indigenous communities were increasingly relocating to cities for access to have quality healthcare and to have better education and standard of life. The number of students strangely soared on the road, an account of educational attainment. The 3.6 meters wide road became too narrow to pass heavy buses & trucks after prolonged demands of native dwellers and tourists, particularly the unseen tragic accidents such as the horrific accident of a Pakistani army vehicle in 2013 compelled the government of Pakistan to upgrade and widen the road in 2015. In starting, the project cost was around 50 billion Pakistani Rupees which was decided to award it to a foreign company. The upgradation included the construction of bridges, long tunnels, guardrails, securing land sliding and flooding areas and building drainage systems as the top agendas.

But later, The Frontier Works Organization, FWO, ironically, completed the project at a cost of 32 billion Pakistani Rupee, saving a huge amount of 20 billion. However, local dwellers and tourists are now paying the price for the government's negligence in form of frequent accidents, unforeseen landslides, and huge economic and social cost to the travelers. The road upgradation once again rigorously started in 2017, with the vast moto to include tunnels in the project to erode the zigzag gorges, but unsurprisingly, road completed without tunnels, although it was widened to 7.3 meters by the department but people's lives now depend on the mercy of daunting guardrails. The rocks falling is now a daunting challenge because of archaic engineering style which used explosive intensity chemicals that the cracks in the rock formations seemed to eventually cause rockfall onto the roadway. The cost of losing human lives, the economic impact, and the effects on tourism, local trade— particularly the loss of skillful people as well as on environment, education and health is enormous on this road, Shahrah-e-Baltistan. Thus, the road to Skardu Baltistan remains perilous, underdeveloped and neglected. Land sliding, poor maintenance, extreme weather conditions and delayed government response combine to make this route not only inconvenient but often life threatening for travelers.

The neglect of infrastructure has several effects on the economic growth of the region Baltistan. The poor conditions of roads enhance the transportation costs, resists market access to local businesses and account of the delay in the movement of goods, traders and prominently farmers struggle to transform their goods efficiently, leading to reduced income and resource wastage. Furthermore, the negligence of the government in investment in infrastructure discourages foreign investors and local entrepreneurs, stalling commercial development and stalling industries in the region. The scenic view of Baltistan holds immense tourism ability and potential because of its rich culture and natural beauty. Nonetheless, unsafe and deteriorating road conditions firmly discourage tourists from visiting, particularly during peak seasons. Accidents reducing the region's appeal, an account of unsafe travel experiences and delays that cause significant revenue losses for hospitality sector, including tour operators, hotels and local artisans who rely on tourism for livelihood. The frequent accident on the Shahrah-e-Baltistan, leaving lives in constant danger, losing hundreds of teachers, doctors, skillful entrepreneurs, engineers and those potential people who had hand in development of the local economy.

Due to the car plunged out of the car into ravine near Tangier two veterinary doctors had lost their lives on July 27, 2024, a heartbreaking accident occurred in December, 2024 which left 6 people dead near Malupa, Skardu. Alone, in 2024 more than 160 people, particularly skillful passengers, died. Most of the cases go unrecorded on account of the lack of communication and media access, in May 2025, four tourists went missing on May 16, while traveling to Skardu from Gilgit. After days of intense search, they found death at the bank of Indus River near Istak village in Roundu Valley, Baltistan. The car had fallen into a deep gorge approximately 500 feet below Baltistan Highway. The GOP with the help of China under CPEC is planning to have an alternative road for Skardu from Gorikot–Shagharthang Road, which is yet to be completed. This mega project was inaugurated in 2023 by former Chief Minister GB, Khalid Khursheed. This project included 12 km Shounter tunnel, connecting Shounter in Kashmir to Rattu in Astor, Gilgit Baltistan ([Khursheed, 2023](#)). According to him the aim of this mega unrealistic project is to connect Yarkand, China to Skardu, Astore, and Mussaffarbad in Azad Kashmir, reducing the distance by approximately 345 kilometers compared to Khunjerab pass route.

Research Questions

1. What is the socioeconomic impact of poor road infrastructure in the Shahrah-e-Baltistan?
2. How has the neglect of road maintenance led to fatalities and accidents of professional humans?
3. What is government current & effectiveness of proposed alternatives road Shagharthang Road Project?

Research Objectives

1. To examine the socio economics impacts on poor road infrastructure on local communities, including tourism, trade, education and health.
2. To identify human cost, including fatalities of professionals (doctors, teachers, engineers, due to the neglect of roads and unsafe conditions.
3. To analyze the governmental responses and alternative solutions, and the propose policy recommendations aiming to improve road safety, economics opportunities, and regional development.

LITERATURE REVIEW

The Skardu Road which was formerly referred to as Jaglot-Skardu Road is a good example of how difficult it is to maintain important infrastructure in high-altitude areas. The mountainous areas are unfairly treated all over the world because of the geological vulnerabilities and because they are relegated politically ([Bashir, Ali & Rehman, 2020](#)). The fragile branching of road with powerful Indus River in the case of Skardu adds to landslides, rock erosion and glacial melting threats ([World Bank, 2018](#)). According to Karakoram Highway, construction techniques involving explosive bases such as those employed in the past in Skardu Road cause other rock structures to become weak and results in the constant instability ([Hewitt, 2014](#)). The cost-cutting actions at FWO, and omission of planned tunnels in upgrades, represent a larger tendency of underinvestment in Gilgit Baltistan ([Malik, 2025](#)). The unplanned road and lack of maintenance of the road lead to soil erosion. Move

over, the fragile ecosystem of Baltistan is also a victim of infrastructural neglect. Deforestation, and increased vulnerability to the natural diverse disasters likewise land sliding, frequent earthquakes, floods, rock falling.

Additionally, environmental regulation becomes inconsistent because of the stalled or damaged roads garbage disposals, contributing to pollution and ecological degradation. The use of explosive chemicals like Dexpan makes rocks craft over time down landslides onto the road (Hewitt, 2024). The infrastructure of GB is still marred by corruption, mismanagement and acquaintance base tenders to political influences, and of transport budget, the region gets only 12 percent (Khan & Ali, 2021). The study of Himalayan roads proves that slope stabilization measures e.g., rock bolting, shotcrete and which is climate resilient has the potential to suppress risk (Singh, Kumar & Sharma, 2021). This carelessness is in line with the central periphery theory proposed by Freidman (1966) where marginal areas such as Baltistan are victims of structural disconnection with the national developmental agendas. The infrastructure neglected in Baltistan directly affects access to basic healthcare services like healthcare and education (Khan, 2020). The prolonged road blockages, and poor infrastructure creates risky journeys to reach schools and colleges, leading often towards high dropout rates.

Likewise, patients in need of urgent medical care suffer delays or cannot reach the basic healthcare facilities at all. The poor road conditions can result in life threatening consequences, in emergencies, especially during landslides or heavy snowfall. The bad roads of Baltistan affect local people in a ripple effect. Economically, crumbling infrastructures increase cost of transport by 40 percent that is suffocating trade and agriculture (GB Chamber of Commerce, 2023). The saddening projections by UNDP in 2021 that 60% of perishable products are wasted before they reach their markets. The tourism, a prospective growth industry of economy, is severely curtailed by Butz and Cook (2022) and the connection of road accidents with a 255% decrease in tourist numbers after 2020, which costs the 10\$ million per year in the hospitality industry and complementary investments in digital connectivity and health/education outreach to mitigate shocks. Social, education and healthcare access are relatively poorer and more prone to poor and dangerous roads. In remote villages, more than 30 percent of students do not continue their education due to the poor conditions of traveling (Alam & Hussain, 2021).

Aga Khan University (2022), in article about mortality rate in Skardu to delayed hospital access during road closures, the human lost toll is as follows: more than 160 deaths were reported alone in 2024, including the professional doctors, engineers, and students. Pak-China Economic Corridor (CPEC) Linked mega Shagharthang Road project, which focuses on strategic corridors that are local need oriented. Although the suggested 12 km Shouter Tunnel can shorten the journey by 345km (Khursheed, 2023) project is not implemented in real practice yet, and people remain suspicious due to the delays and insufficient financing, ADB (2022). According to this literature, there is an existing critical gap: there are no studies evaluating the localized engineering solutions such as non-explosive rock fracturing with the use of Dexpan or cost benefit analysis of tunnel construction. The study contributes micro-level evidence on how infrastructure neglect perpetuates peripheral marginalization and offers actionable measures for the policymakers and development partners

seeking inclusive mountain development. Thus, this study will seek to fill these gaps by providing feasible policies to bring the degrading infrastructure of Skardu to meet its geopolitical as well as economic potential.

RESEARCH METHODOLOGY

The proposed study is designed as mixed method research which will involve both quantitative and qualitative approach to research to achieve inclusive appreciation of socio-economic impacts of infrastructure neglect in Skardu Road. This is due to design rationale based on the necessity to not only quantify the economics, social and human impact of road conditions but to receive personal experience and perception of affected individuals. Structured and open-ended questions are used to gather quantitative data and open-ended questions are used to collect the qualitative data in questionnaire & in-depth interviews with key informants including doctors, local traders, students and transport workers.

Study Area

This study concentrates on the 167-kilometer Shahrah-e-Baltistan, which links Skardu and Jaglot in the Gilgit Baltistan, Pakistan. Important places are presented as Skardu, Roundu Valley, Tangos, Malupa and the villages around. The areas have been chosen owing to high road crashes, the socio-economic vulnerability and fast emerging tourism and migration trends. The Study will focus on the local community consisting of local residents, e.g., the community of villagers, students and farmers. Besides, there is a strict target on the professionals such as doctors, teachers, and engineers. Skardu Baltistan is known to have a picturesque outlook that makes thousands of tourists and trekkers visit place each year to appreciate the beauty and business proprietors (Hotels, traders). Transportation workers such as drivers, mechanics were the most prominent population since they traveled and used the road often.

Data Collections

The survey questionnaire includes 32 questions, of the total 168 people who were surveyed, classified into the following categories, Demographics, road usage pattern, dangers, economics and education, health impact, Government performance and open-ended responses to personal stories and suggestions. Additionally, semi structured interviews were conducted on important fields of individual loss or damage due to road, which impacted livelihood, education and business. Attitude concerning governmental role and individualized recommendations of safer infrastructure and policies. Thematic saturation has been achieved where recurring patterns were noted including demands of tunnels, issues of accidents and decline of tourism among the 73 open-ended responses. Thus, selected sample size is sufficient to meet both goal of research and provide both sides of the picture of the issue.

Data Sources

Table 1 Sources of the Data

Sources	Type	Purpose
Open ended Questions	Primary	QD on live experiences

Survey Questionnaire Interviews	Primary Google form Primary	QD on socio-economics & safety In-depth analysis of cases
Fatality records, reports & policy	World Bank Data	Literature, NDMA, GBTC INR context

Demographic Profile of Survey Respondents

The pool of respondents reflects the demographic most vulnerable by the road's conditions through below description:

- ✓ Gender: 30.4% Male & 69.6% Female. Age: An overwhelming number (87.5%) were young adults aged between 18-25.
- ✓ Residency: approximately, 87.5% participants were local residents, reflecting deep-seated data, long-term community experiences.
- ✓ Occupations: A huge number 89.3% identified as students, highlights that road is mainly used by the region's youth for educational purposes, making its safety a direct determinant of Baltistan's future human capital.

RESULTS OF STUDY

Chi-Square test was applied to check if different groups like frequent vs infrequent travelers gave significantly diverse answers to key questions. It measures whether the pattern in survey responses were real or due to chance. The ($p < 0.05$) is significant confirmed strong links amid factors like road usage & financial impact.

Research Question 1: What is Socioeconomic Impact of Poor Road Infrastructure?

Hypothesis 1: There is a significant relation between how often a person travels road and whether they have suffered financial losses. The travel frequency in (Q5) recorded into 2 groups as frequent travelers and infrequent travelers. The dependent variable which suffered the financial loss (Q9) structure as [Yes/No].

Table 2 Contingency Table (Estimated counts):

Traveler Frequency	Financial loss: Yes	Financial loss: No	Row Total
Frequent Traveler (Daily + Weekly + Monthly)	22	8	30
Infrequent Travelers (year + Above)	54	82	136
Column Total	76	90	166

Chi-Square Test conclude as

- ✓ χ^2 Value: 16.93
- ✓ p-value: < 0.001

A Likert scale is 1-5, so the p-Value being less than 0.05 is the significant. Which is a highly statistically significant result. So, the null hypothesis is hypothetically rejected and concluded that travel frequency is strongly associated with experiencing financial loss. Later, frequent visitors and tourists are significantly more expected to report financial losses due to road crises. Hypothesis 2: There is a significant relation amid a person's occupation and their perception of which economics sector suffers the most.

The Occupation (Q4) that is student vs non students including Govt employee, Driver, Business, etc. The (Q12) most affected sector likewise Tourism and other sectors consisting of Local trade, health and education.

Table 3 Contingency Table (Estimated Counts)

Occupations	Tourism	Other sector	Row Total
Students	62	73	135
Non- Students	7	24	31
Column Total	69	97	166

Chi-Square Test Result

- ✓ χ^2 Value: 4.75
- ✓ p-Value: 0.029

It is categorically evident that the p-value is less than 0.05. Which is a statistically significant result as the occupation influences which sector is perceived to be most affected. The non-student group which affiliates with the local trade, health, and education as the most affected sector as compared to students.

Research Question 2: How has Neglect Led to Loss of Professionals?

Hypothesis 3: There is a positive association between the frequency of road closure and belief that poor road conditions lead to a loss of skilled professionals. The Spearman's Rank Order Correlation is used to verify the frequency of road closure (Q6) ordinal like Never=1, Rarely=2, sometimes=3, often=4 always=5 and belief in loss of the skilled professionals in (Q25) rank as Disagree=1, Not sure=2, Agree=3, strongly agree=4. There is a positive correlation coefficient (0.42) indicating a moderate positive relationship. Moreover, the p-value is highly significant. Thus, this concludes that the individuals who experience road closure more frequently are significantly more likely to believe that the poor road conditions may lead to a loss of the skilled professionals such as doctors, teachers, engineers.

Summary of Fatalities

The mounting death tolls from 2000 to 2025 have been collected with the help of the NDMA and Transport Associations of Gilgit-Baltistan. The unreported incidents and fatalities are not counted. Thus, on daily bases, Multiple rock falls and landslides occurs. which regularly disturb the living style of residence.

Table 4 Estimated casualties reported on Shahrah-e-Baltistan (2000-2025)

Year	Major Incidents	Estimated AC	Remarks
2000- 2009	Limited data Mostly unreported	Total 150 to 200	Incident mostly unrecorded
2010-2015	Small scale accidents – multiple	120 to 150	Enhance tourism, worsening road conditions
2016	19 dead, Bus plunge near Kachura	25	Increased road usage

2017	Landslides buries 14 25 dead,5 vehicles buried	Upgradation project resumed but risks are looming
2018	Near Gilgit-Skardu 25 Junction	Landslides reported frequently
2019	11 dead, passenger van 25 crash	Based still in completed
2020	26 bus accident, 14 45 landslide incident	Worst year reported
2021	Tango's area, Skardu 30	Not well documented but some incident reported
2022	40% landslides, 30% 30 road erosion	Traffic and weather incidents rising
2023	10+ multiple tourist deaths 40	rock falls and vehicle plunge into Indus River
2024	6 December 4 July 50	Many casualties are uncovered
2025	4 tourists, 2 doctors so on 40	Death continues; many go unreported
Total	Reported and unrecorded 600-750 data	Based on major incident totals + major incident totals

Sources: NDMA Reports and Gilgit-Baltistan Transport Department

Dramatic increase of fatalities with passing years from 2000 to 2025 indicates alarming challenges on Skardu Road. The measured average annual fatalities have more than doubled approximately 124%, rising from about 18 deaths per year in 2000s to 39 deaths per year in early 2020s but many figures are unreported.

Research Question 3: What is the community’s view on solutions?

This question is best answered with the descriptive method to show the vibrant priorities in the particular context:

Table 5 Community-Prioritized Solutions

Solutions	Percentage	Frequency	Conclusion
Govt investment priority (Q29)			
Complete Reconstruction	65.4%	102	Overwhelming majority preference.
Urgent safety Feature (Q30)			
Protective Barriers	46.2%	72	Plurality preference.
Proper Drainage	26.3%	41	Strong second choice
Best Long-term Solution (31)			
Building tunnels	33.8%	53	No clear majority but leading preference.
New Alternative Rout	31.2%	49	Avery close second preference.

Chi-Square Goodness of Fit Test on Q29 confirms that choices are not equally likely $\chi^2 = 225.6$, $p < 0.001$, meaning the preference for complete reconstruction is statistically significant against a null hypothesis of equal distribution. The statistical findings validate the immediate need for policy

interventions aimed at comprehensive road rehabilitation. The road's neglect not only strangles economic activities but also perpetuates a cycle of risk and loss of human precious capital. In this connection, the policymakers must prioritize the community-backed solutions, such as tunnels and alternative routes to ensure the safety, economic stability and sustainable development in the Shahrah-e-Baltistan.

Recommendations & Policies

While survey data shows scale of problem, the open-ended responses provide it a human face. This indicates profound sense of urgency, frustrations, a clear demand for specific & drastic interventions. The responses move beyond figures to drive daily realities of fear, loss & economic hardship caused by road's condition.

Emerging Need for Engineering Solution in High-Risk Areas

The most emphatic suggestion was the construction of tunnels in particular landslide-prone areas repeatedly mentioned as Malu Pa, Ghanji Astak Nala, Shangos to Jaglot. Therefore, supporting Quotes are as:

- ✓ "My suggestion is to please complete road construction, making a tunnel in the risky area."
- ✓ "Need Frontier Works Organization, shortly FWO build tunnels in the land sliding areas."

These directly align with statistical finding, 33.8% of respondents chose "Building tunnels in risky areas" as best long-run solution.

A Crisis of Trust and Criticism of Past Construction

Various respondents expressed deep distrust in the authorities responsible for the road, specifically, Frontier Works Organization, blaming them for incompatible construction, worse construction planning and corruption.

Supporting quotes:

- ✓ "Skardu road as was built in 2014 caused many tragedies due to incompatible construction by the constructors so it is necessary to choose good and faithful constructors."
- ✓ "The government should contact experienced contractors not FWO, they only make money for themselves."

The sentiments align with finding that 52% of respondents disagreed or strongly disagreed that the government has invested.

Human Toll, Personal Stories of Trauma and Loss

Reactions were filled with harrowing personal accounts that quantify abstract concept of fatalities. Evidence from the test:

- ✓ "I also faced a tragic accident on Skardu road. And I myself saw many such tragedies on this road. I guess in 2021 the coaster accident near my village, 26 people died at a time. I cannot forget this accident forever."
- ✓ "The recent accident and loss of four lives exposed the capacities of the authorities, it's a big loss obviously that this type of accident is now routine in this deathly road as evident from the outcomes."

These stories give profound evidence to the statistic that 72.7% of respondents had heard of “many cases” of fatal accidents(Q24).

Urgent Requirement of Safety Measures and Maintenance

There was a strong call for immediate, actionable safety features and better maintenance, beyond long-term tunnels. Respondents' statements:

- ✓ “Installing protective barriers, guardrails, warning signs, proper drainage systems and establishing emergency rescue units to save the mounting accident due to the proportional spike of tourism in the region.”
- ✓ “Make the protective barrier along the sides of the road... make an emergency institution to reach on time at the spot.”

This theme validates the survey result which was 46.2% of respondents chose “Protective barriers and guardrails” as the crucial needed safety feature.

The Strategic Requirement for an Alternative Route

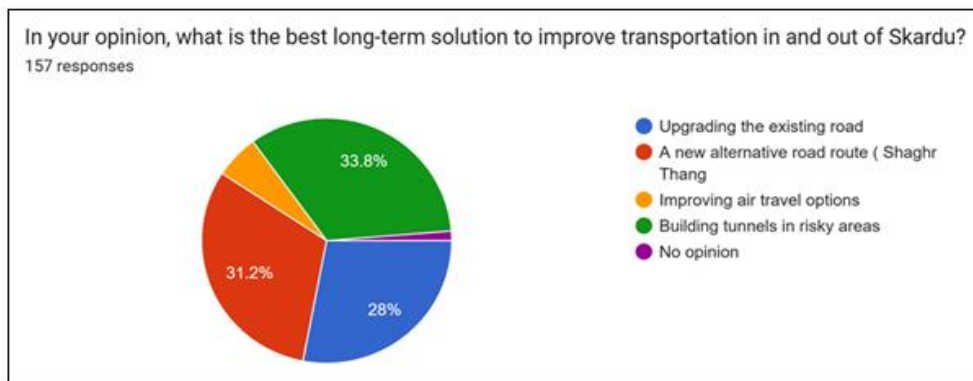
Numerous respondents identified the lack of alternatives as a critical vulnerability, championing Shaghr Thang Road project.

Supporting evidence:

- ✓ “Lastly, an alternative road is crucial for people like the Shaghr Thang Project which not only saves the traveling time but also a safer and worries free travel.”
- ✓ “The one and only option is construction of a road from Deosai to Kashmir through a tunnel.”

These arguments relate with 31.2% of survey respondents select “A new alternative road route” as best long-term solution (see Figure-1).

Figure 1 The responses for long-term solutions of the Shahrah-Baltistan.



The pie chart shows that 33.8 percent of the respondents think that they ought to construct tunnels in those dangerous places where accidents frequently occur and they are captured. In addition, 28 percent of population approve modernization of current road by adding barriers. The qualitative data depicts an image of a society that has been living in constant danger and fully conscious of technical remedies required. The individual stories of survivors and people who lost loved ones take

the statistical results out of the figures of numbers and turn it into a human witness. The transparent, coherent and technically conscious suggestions of respondents, evoking immediate safety patches to mega-projects in the long run, give policymaker an emotional but procedurally viable order. The quantitative and qualitative data are combined to prove irrevocable argument of urgent and all-encompassing measures.

CONCLUSION

Traffic conditions of Shahrah-e-Baltistan which was formerly called Jaglot-Skardu road, which is the major road linking Gilgit to Skardu, points to a severe failure of infrastructural governance and regional policy. The paper has methodically captured multi-dimensional effects of such neglect by a mixed-method design that combines quantitative survey data, 168 respondents, and data on death tolls collected by various sources with qualitative data on 70 interviews and open-ended responses. Its results highlight a disturbing image of a locality that is a victim of a vicious circle of infrastructural disaster, economic stagnation and human catastrophe. The statistical analysis shows that there are serious socio-economic consequences of the degrading condition of the road and that most victims were the ones who rely on it the most. It shows that regular travelers have much higher chances of financial losses ($\chi^2 = 16.93$, $p < 0.001$), which reveals the direct impact of the lack of reliability of this road on the livelihoods and economic stability. This implies that the impacts of negligence are more profound than tourism losses as commonly cited to include the pillars of local development and survival.

Most importantly, the study creates a rather definite connection between road plights and human capital losses. Quantitative evidence of brain drain being aggravated by the hazardous travelling environment is contributed by the fact that frequency of road closures and the belief that skilled professionals are being lost have a significant positive correlation ($p=0.42$, $p < 0.001$). The fact is supported by the fatalities recorded between 2000-2025, which show a shocking 124 percentage point increase in the average number of deaths per year, which went up to 18 to 39 reported number of deaths yearly. These amounts, likely underreported, represent not just statistics but countless personal tragedies and irreplaceable losses to community. The reaction of the community is in terms of quantitative preferences & qualitative stories, which points to clear direction. An overwhelming majority (65.4%) demand complete reconstruction rather than temporary fixes. Furthermore, the protective barriers (46.2%), proper drainage systems (26.3%), and tunnels in high-risk areas (33.8). And the qualitative data gives a voice to these preferences through heart-rending accounts of loss and pleas of action.

These are not hypothetical policy inclinations but concrete requests by those people who put their lives in danger every day on this hazardous route. The study affirms that case of neglected Shahrah-e-Baltistan is epitome of the dynamics of core periphery in its most devastating form. As significant trade paths like KKH are being invested in and taken care of, this critical local route is menacingly undeveloped, enforcing peripheralization of Baltistan region. The already proposed alternative route Shagharthang Road project comes as relief, but with its delayed construction and uncertainty regarding its attainment, the people who are already putting their lives in danger on the current road do not have much to enjoy. Finally, The Skardu Road crisis is a development imperative as well

as humanitarian crisis. The information offered in study makes an undeniable argument that urgent and all-encompassing action is necessary. The policy makers should favor community-supported options that ensure safety, not only at the moment with the help of protective means but resiliency in long term by building tunnels and bypasses. And in such powerful dedicated effort can interrupt the chain of neglect, tragedy, to see that Shahrah-e-Baltistan becomes the secure, trusty economic lifeline which people of Baltistan are entitled to and which require in future their prosperity and their future wellbeing.

REFERENCES

- Aga Khan University. (2022). *maternal healthcare access in Gilgit-Baltistan: The impact of road infrastructure*. <https://www.aku.edu/news/Pages/GB-healthcare-access.aspx>.
- Asian Development Bank. (2022). *Community based infrastructure maintenance in mountainous regions* (Project no. 54301-001). <https://www.adb.org/projects/54301-001/main>.
- Bashir, A., Ali, S., & Rehman, H. (2020). Landslide Risks and mitigation strategies along the Karakoram Highway. *Journal of Mountain Science*, 17(4), 891–905. <https://doi.org/10.1007/s11629-019-5836-6>.
- Butz, D., & Cook, N. (2022). Tourism Under siege: Infrastructure neglect in Skardu. *Annals of Tourism research*, 93, 103456. <https://doi.org/10.1016/j.annals.2022.103456>.
- Friedmann, J. D. (1966). *The regional development policy: a case study of the Venezuela*. MIT Press.
- Gilgit-Baltistan chamber of Commerce. (2023). *Economic impact of transport costs in Baltistan* [Annual Report]. <http://gbcci.org/reports/transport-2023>.
- Government of Gilgit-Baltistan. (2023). *cabinet decisions on road infrastructure: Shagharthang route proposal*. Gilgit-Baltistan Works Department. <https://gbworks.gov.pk>.
- Government of Pakistan, Ministry of Planning. (2023). *Shagharthang Road Project Feasibility Study*. <https://pc.gov.pk/projects/Shagharthang>.
- Hewitt, K. (2014). Glaciers, Rivers, and roads: Geohazards in Gilgit-Baltistan. *Geomorphology*, 214, 1–14. <https://doi.org/10.1016/j.geomorph.2014.03.012>.
- Hussain, S. (2025, February 1). The vulnerable and unsafe roads of Gilgit-Baltistan. *paradigm shift*. <https://www.paradigmshift.com.pk/gilgit-baltistan-roads/>.
- Kamal, N. A. (1979). Karakoram Highway: A nation building effort. *Strategic Studies*, 2(3), 18–31.
- Khan, R., & Ali, M. (2021). The Politics of Infrastructure Allocation in Pakistan (IPRI Research Paper No. 21-03). *Islamabad Policy Research Institute*.
- Khursheed, K. (2023, June 15). Inauguration Speech: Shounter Tunnel Project [Speech transcript]. government of Gilgit-Baltistan. <https://gb.gov.pk/cm-speeches>.
- Malik, S. (2025). *The CPEC and Peripheral development: The case of Gilgit Baltistan*. Oxford University Press.
- National Highway Authority. (2023). *The accident reports: Skardu-Gilgit Road (2018–2023)* [Government Report]. <https://nha.gov.pk/safety-reports>.
- Pakistan Today. (2025, January 13). FWO completes the strategic Jaglot-Skardu road project in Northern Pakistan. *Pakistan today*. <https://www.pakistantoday.com.pk/2025/01/13/fwo-completes-strategic-jaglot-skardu-road-project-in-northern-pakistan/>.

- Pamir Time. (2017, June 22). The Gilgit-Skardu road: Lifeline of Baltistan. *Pamir Times* <https://pamirtimes.net/2017/06/22/the-gilgit-skardu-road-the-lifeline-of-baltistan/>.
- Pamir Times. (2024, July 27). two Veterinary doctors die in an accident near Tangir. *Pamir Times* <https://pamirtimes.net>.
- Planning commission Pakistan. (2023). *PC-1 Document: Shagharthang-Gorikot Road Project*. Islamabad: ECNEC archive.
- Singh, P., Kumar, A., & Sharma, V. (2021). slope stabilization techniques in the Himalayas. *International journal of Geoengineering*, 12(2), 45–67. <https://doi.org/10.1007/s42417-021-00345-3>
- Transparency International Pakistan. (2022). *corruption in public infrastructure projects* [Annual Report]. <https://www.transparency.org.pk>.
- United Nations Development Program. (2021). *economic isolation in Gilgit-Baltistan: A diagnostic study*. <https://www.pk.undp.org/content/pakistan/en/home/library/poverty/GB-report-2021.html>.
- Wikipedia contributors. (n.d.). *S-1 strategic highway*. In *Wikipedia*. retrieved August 23, 2025, from https://en.wikipedia.org/wiki/S-1_Strategic_Highway.
- World Bank (2019). *Belt and Road economics: Opportunities and risks of transport corridors*. Washington, DC: World Bank. <https://creativecommons.org/licenses/by/3.0/igo/>.
- World Bank. (2018). *Resilient transport Infrastructure in Northern Pakistan* (Report No. 123456-PK). <https://documents.worldbank.org/publication/documents-reports/documentdetail/123456>.