

Investigation into the use of motorcycle three-wheelers ('Qingqis') as a mode of public transport in Punjab Province

Progress Report



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Cover photo. Paul Starkey. Qingqi at a rural transport hub in PD Khan, Jhelum, Punjab, Pakistan

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Abstract

ReCAP has contracted IMC Worldwide to undertake research on the use of motorcycle three-wheelers ('Qingqis') for rural transport services in the Punjab. Following the literature review and initial analyses of issues presented in the Inception Report, and the preparation of an international workshop paper, this Progress Report presents the survey instruments to be used during the research. These include traffic counts and surveys of transport users and transport operators. These will obtain information on the costs and tariffs of Qingqis and the other transport modes available, as well as patterns of use, operator associations, safety issues and people's preferences. Motorcycles are increasingly common and maybe affecting the passenger demand for Qingqi services. Given the gendered ownership (by men) and use of motorcycles, additional surveys of motorcycle owners will complement the public transport user surveys (that should include 50% women respondents) with questions including how often women and children are carried by personal motorcycles. Important school transport issues will be covered in user surveys, motorcycle surveys and key informant interviews at the local schools. During April, the research team jointly visited the selected research villages in three districts of Punjab, gaining new insights into rural transport operations. They made a presentation at the National Transport Research Centre (NTRC) which initiated this research project. Ramadan starts on May 6 and will affect travel patterns in villages. Therefore, the traffic counts were completed in April. Due to the practical problems of undertaking research in Ramadan, it is proposed the next visit of the international team members be postponed until June which will have implications for subsequent milestone deadlines as currently contracted.

Key words

*Qingqis; Three-wheelers; Autorickshaws; Transport services; Rural mobility; Transport regulation; Motorcycles
Intermediate means of transport; Punjab*

Research for Community Access Partnership (ReCAP)

Safe and sustainable transport for rural communities

ReCAP is a research programme, funded by UK Aid, with the aim of promoting safe and sustainable transport for rural communities in Africa and Asia. ReCAP comprises the Africa Community Access Partnership (AfCAP) and the Asia Community Access Partnership (AsCAP). These partnerships support knowledge sharing between participating countries in order to enhance the uptake of low cost, proven solutions for rural access that maximise the use of local resources. The ReCAP programme is managed by Cardno Emerging Markets (UK) Ltd.

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Acronyms, Terminology, Units and Currencies

AsCAP	Asian Community Access Partnership
Bhatta	Bribe
CBA	Cost-benefit analysis
Chak	Village
CNG	compressed natural gas
DFID	Department for International Development, UK (UKaid)
EDB	Engineering Development Board
eg	for example
GBP	Great Britain Pound, UK pound sterling (in April 2019, GBP 1 ≈ PKR 183)
IMC	IMC Worldwide Ltd
IMT	Intermediate Means of Transport
kg	kilogram
km	kilometre
LVRR	Low-volume rural road
NGO	Non-governmental organisation
NTRC	National Transport Research Centre
NUST	National University of Sciences and Technology
pax	Passengers
PD	Pind Dadan
PKR	Pakistan Rupee (in April 2019, PKR 1 ≈ GBP 0.0055 ≈ USD 0.0071)
PMU	Project/Programme Management Unit
PSQA	Pakistan Standards Quality Assurance p Pages
ReCAP	Research for Community Access Partnership
RTS	Rural transport services
RTSi	Rural transport services indicator
Tanga	Horse-drawn carriage
tehsil	Sub-District
TL	Team Leader
TOR	Terms of Reference
UK	United Kingdom (of Great Britain and Northern Ireland)
UKAid	United Kingdom Aid (Department for International Development, UK)
USD	United States Dollar (in April 2019, USD 1 ≈ PKR 141)

Executive Summary

The Research for Community Access Partnership (ReCAP), funded by UKAid, contracted IMC Worldwide to carry out research on the use of motorcycle three-wheelers (known as ‘motorcycle auto-rickshaws’ or ‘Qingqis’) for rural public transport in Punjab Province. The National Transport Research Centre (NTRC) had requested this research and is working with the IMC team to help define the key issues, involve key institutional stakeholders and disseminate the findings.

Qingqis generally have three forward-facing and three rear-facing passenger seats, but some have sideways-facing seats and freight versions are also used. Scooter-based auto-rickshaws (sometimes known by the Indian brand name of ‘Bajaj’) have smaller front wheels and are mainly used in urban areas. While Qingqi is a brand name (originating from China), it has now come into common parlance in Pakistan as a generic term (‘proprietary eponym’) for motorcycle rickshaws and is even used in certain legal documents in this generic way. There are several factories producing motorcycle rickshaws, but recent team observations suggest that most rural ‘Qingqi’ bodies appear to be made (or rehabilitated) in numerous informal sector workshops and fitted onto a range of different new or second-hand motorcycles.

While the project’s Inception Report included a literature review and situation analyses of the key issues, this Progress Report focuses on subsequent developments. These include the preparation of a paper for the World Road Congress to be held in Abu Dhabi in October 2019. The team worked together in Pakistan in the first half of April, and this allowed them to develop the various survey instruments they will use during the data-collection phase. The forms are included here as Annexes B-F. The traffic count forms, user survey forms and operators’ surveys build upon the Rural Transport Services Indicator (RTSi), with emphasis on the need to consider the views of all stakeholders, including the diversity of rural people (gender, age, occupation, disabilities, etc) requiring transport services. However, the questionnaires have all been designed for the specific surveys of Qingqis and alternative transport services options. Following the concern expressed by some Qingqi operators that the rapid growth in the use of motorcycles was diminishing the transport services market, an additional survey questionnaire has been designed to investigate how motorcycles are used, and how they may affect the women and children in the households.

Three districts have been selected for the quantitative research, in northern, eastern and southern Punjab. During April, the team visited the chosen districts, and fine-tuned the selection of roads to ensure they appeared to be representative of their areas and would lead to valuable findings. In the north (PD Khan), an alternative rural road was selected to avoid the rural transport distortions related to a nearby cement factory. The alternative road has an interesting example of two means of transport (Qingqis and pickups) collaborating with a joint timetable system. In the south (Lodhran), the selected road (and catchment area) was extended to a transport hub in a further village. In the east (Kasur), additional roads were identified as being relevant to that transport catchment area, so that extra traffic counts will be conducted in order to better understand all the traffic movement in the catchment area. The traffic count sites for all villages were identified and the traffic counts were undertaken at the end of April.

In April, the team made a presentation concerning this research at NTRC and held detailed discussions on many relevant issues. The Assistant Chief of NTRC joined the team during various stakeholder meetings with key informants (Government of Punjab and United Auto Industries) in Lahore. Options for the dissemination workshop, currently scheduled for July, were also discussed with NTRC.

Cost benefit analyses will be important outputs of this research, and the project will benefit from increased inputs from the team’s transport economist. Economic and financial analyses are envisaged, subject to the initial survey findings and apparent options for future improvements to rural transport services. The survey questionnaires have been designed to allow data to be collected on all existing public transport options, and this data can be supplemented by additional interviews focussing on identified opportunities for improvements. The transport economist and team leader were intending to visit Pakistan in late May, but the NTRC advised that this should be delayed until mid-June to avoid Ramadan and Eid ul Fitr. This has impacted the agreed timing of the current implementation programme.

1 Background

1.1 Introduction to Qingqis

Following-up a research suggestion provided by the National Transport Research Centre (NTRC), the Research for Community Access Partnership (ReCAP), funded by UKAid, commissioned IMC Worldwide to undertake a research study on the use of Qingqis as a mode of public transport in the Punjab Province of Pakistan.

Qingqis are motorcycle-based three-wheelers that are used for urban and rural public transport services. They generally have six seats, three forward-facing and three rear-facing (see Figure 1). Using motorcycle-size front wheels, they differ from motor-scooter-based auto-rickshaws (often known by the 'Bajaj' brand name). Auto-rickshaws have smaller, scooter-sized front wheels and may have just three forward-facing seats (see Figure 2). However, in common parlance and in much of the literature, the different types of three-wheeler are often not distinguished, and may be referred to as Qingqis, rickshaws (with, or without, the 'auto-' prefix) or three-wheelers.

Figure 1 Examples of 6-seater passenger Qingqis in Punjab Province



Figure 2 Examples of Autorickshaws in Punjab Province: 3-seater, sideways seats and freight (2)



Qingqis appear to have been first used in the Punjab, where they initially replaced 6-seater, horse-drawn *tangas* (Hasan and Raza, 2015). The name comes from the Chinese Jinan Qingqi Motorcycle Company, which manufactures motorcycles, scooters and three-wheelers. Initially, the Qingqi three-wheelers were imported from China, but they are now manufactured in Pakistan (with imported and local components), notably by Plum Qingqi and United in Lahore. Although the word Qingqi originated as a brand name (which is still in commercial use) in Pakistan, Qingqi is now a commonly-used generic term ('proprietary eponym') for a motorcycle-based three-wheeler, and the name Qingqi is used as a generic term in some legal documents, including a Supreme Court judgement (Supreme Court, 2015). In this document, Qingqi is used as a general term for a motorcycle-based three-wheeler (a motorcycle rickshaw) and in contrast to scooter-based auto-rickshaws. Plum Qingqi (that still has the rights to the Qingqi brand name in Pakistan) is no longer the major formal-sector manufacturer of motorcycle rickshaws, and most rural 'Qingqi' bodies appear to be made in numerous informal sector workshops and fitted to a range of different motorcycles.

Some passenger Qingqis made by the informal sector have sideways facing seats (see Figure 3). These are often used as small 'school buses' to transport ten (or more) children to and from schools.

Figure 3 Examples of passenger Qingqis configured with sideways-facing seats in Punjab Province



There are also freight-carrying Qingqis, as illustrated in Figure 4. These ‘loader’ Qingqis also come in many configurations including enclosed/box body, cage, flat-bed and pickup bodies as illustrated in Figure 4.

Figure 4 Examples of ‘loader’ Qingqis for freight transport in Punjab Province



1.2 Research objective and envisaged outcomes

The overall purpose of the project is to conduct a detailed investigation into Qingqis as a mode of public transport in Punjab. The study is considering the technological (including power options), economic, social (including gender), legal, safety and environmental aspects of Qingqis and their implications. The project is also considering the alternative options to Qingqis for public transport, and their relative advantages and disadvantages.

In the long term, this research should lead to improved mobility for rural people in Pakistan through better public transport services.

In the short-to-medium term, the research will promote greater understanding of Qingqis as a form of public transport, and options and recommendations for their improvement (and/or replacement) and appropriate regulatory initiatives.

The evidence collected from a wide range of relevant stakeholders will be shared in a series of reports and a stakeholder workshop, and shared internationally through a journal article and conference presentation.

1.3 Inception report

An Inception Report was prepared in February 2019, and following reviews was revised and finalised in April 2019 (Starkey, Batool and Waqas, 2019a). This included a literature review, an initial analysis of some of the relevant issues, suggestions for three research sites in Punjab Province and initial plans for the surveys and other data collection. Most of the contents of the Inception Report will not be repeated in this Progress Report. Rather, this report will concentrate on the progress that has been made, together with updated progress on the surveys and the work programme.

2 Progress since the Inception Report

2.1 Preparation of paper for World Transport Forum

In March, the team prepared a paper to be presented at the World Transport Forum due to be held in Abu Dhabi in October 2019. The paper (Starkey, Batool and Younis, 2019b) is due to be peer-reviewed.

The Team Leader, Paul Starkey, visited Pakistan from 1-15 April 2019, and worked with the team members (Dr Zahara Batool and Waqas Younis) and with NTRC. Mr Sayer, Assistant NTRC Chief joined the team in

Lahore, Punjab, for some meetings with stakeholders from the Government of Punjab (Transport Department and Excise and Taxation). Mr Sayer also joined a visit to United Auto Industries, a major manufacturer of Qingqis. The information collected from these and other visits and discussions will be presented in the subsequent Draft Final Report.

Mr Sayer provided a copy of the National Transport Policy of Pakistan 2018 (Pakistan, 2018), which is still in a draft form, awaiting formal confirmation. The policy is optimistic with a vision of providing ‘safe, affordable, efficient, durable and environmentally friendly means of transport, ensuring reliable access to jobs, markets, education and other services for all’. It stresses the importance of non-motorised means of transport and public transport services. It states ‘rural roads will remain vital for providing accessibility to local communities and public services. Focus will be placed on provision of rural transport services, in addition to providing all-weather road infrastructure’. The emphasis on affordable and inclusive transport services will be very relevant when considering Qingqis and alternative means of rural transport.

On 10 April, the team members made a presentation at NTRC headquarters, providing details of the proposed research methodology and some of the issues to be considered. The meeting was attended by various external stakeholders including staff of the National University of Sciences and Technology (NUST) and the Engineering Development Board (EDB). While EDB has a regulatory and inspection function for the formal sector and Qingqi manufacturers, it is the Pakistan Standards Quality Assurance (PSQA) that determines the standards to be followed. The meeting included much discussion of the issues of Qingqis, and these formal discussions were followed up with more informal discussions with the NTRC Chief, Mr Hameed Akhtar and Mr Sayer. The team’s presentation is attached as Annex A.

Despite the fact that ‘Qingqi’ is still a brand name, it was agreed that ‘Qingqis’ could be used in reports, provided that it was defined as a ‘motorcycle rickshaw’ (in contrast to scooter-based ‘auto-rickshaws’). It was also agreed that the descriptor of ‘motorcycle three-wheelers’ could be used in the titles of publications intended for international readers, as a more widely understood definition.

Options for the stakeholder workshop, currently scheduled for July, were discussed, including the possibility (suggested by the NTRC Chief) that it be held in Lahore to allow greater participation of the Government of Punjab. However, national-level stakeholders would be more likely attend a workshop in the NTRC conference room in Islamabad. Further discussions with NTRC and with IMC Pakistan are continuing.

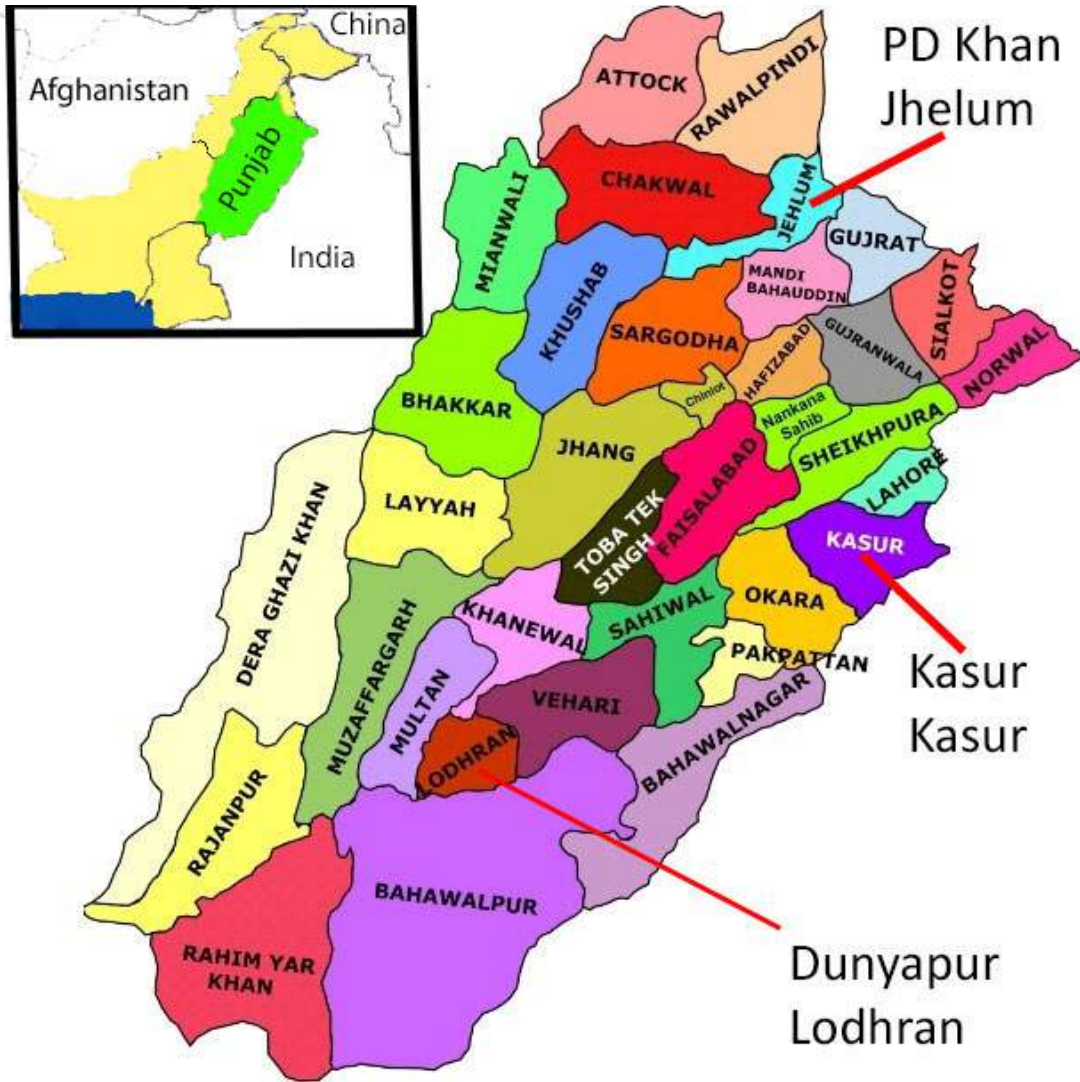
Figure 5 NTRC presentation meeting



2.2 Team visits to research sites

Three potential research sites were proposed in the Inception Report and have been accepted by NTRC. These cover different types of rural areas in Punjab Province, in the north (Jhelum District in Rawalpindi Division), in the east (Kasur District in Lahore Division) and the south (Lodhran District in Multan Division). The district locations are shown in Figure 6.

Figure 6 Map of Punjab Province showing districts and the three locations visited in the Inception Phase



Source: Politicpk (2019)

Within each of the districts, villages were selected that appeared relatively representative of the local rural area. These were not on major highways and were not very close to large cities. They were connected by low-volume rural roads to nearby market towns, which were likely to act as small transport hubs for rural transport services. The villages initially selected are shown in Table 1.

Table 1 Villages selected for research studies

Division	District	Tehsil (SubDistrict)	Villages (Chaks)
Rawalpindi	Jhelum	PD Khan / UC# 06	Dandoot, Khewara
Lahore	Kasur	Kasur	Satu Ki
Multan	Lodhran	Dunyapur	384WB, 377WB, UC # 32

In April, the team visited all these villages to obtain a more detailed knowledge of the context and to discuss appropriate sites for the traffic counts (which were completed in April, before the onset of Ramadan). Observations from the three sites are provided in the following report sections.

2.2.1 Proposed research site in Kasur District (east-central Punjab)

Satu Ki is a village in Kasur District, situated 20 km away from Kasur city. It is connected to three small towns: Mustafa Abad, 12 km to the east; Rao Khanwala, 6 km to the south; Raiwind, 12 km to the west. This is illustrated in Figure 7. It has a total population of 11,000, with about 2,000 hectares of good agricultural land. There is an elementary school in the village but high school children have to travel to the nearby towns (about 10-12 km), with some boys using bicycles and girls tending to use Qingqis. There is said to be a high dropout rate for girls in the high schools, with a suggestion by the villagers that this may be due to cultural and economic issues related to transport services. As the village is relatively close to Lahore, some people commute by motorcycle or by an early morning midi-bus (Coaster). Minibuses and midi-buses are not generally available in the day time. There are some pickups, but most people who do not own transport depend on Qingqis.

Satu Ki has three access roads to the three local towns, and also two other roads to the west that are used by people in that catchment area. Traffic counts were recorded on all five of these roads in order to obtain a clear understanding of the various transport patterns and the mix of vehicles. The approximate traffic count locations are shown in Figure 7. Figure 8 shows one of the traffic counts sites.

Figure 7 Map (left) and schematic diagram (right) of proposed survey site in Kasur

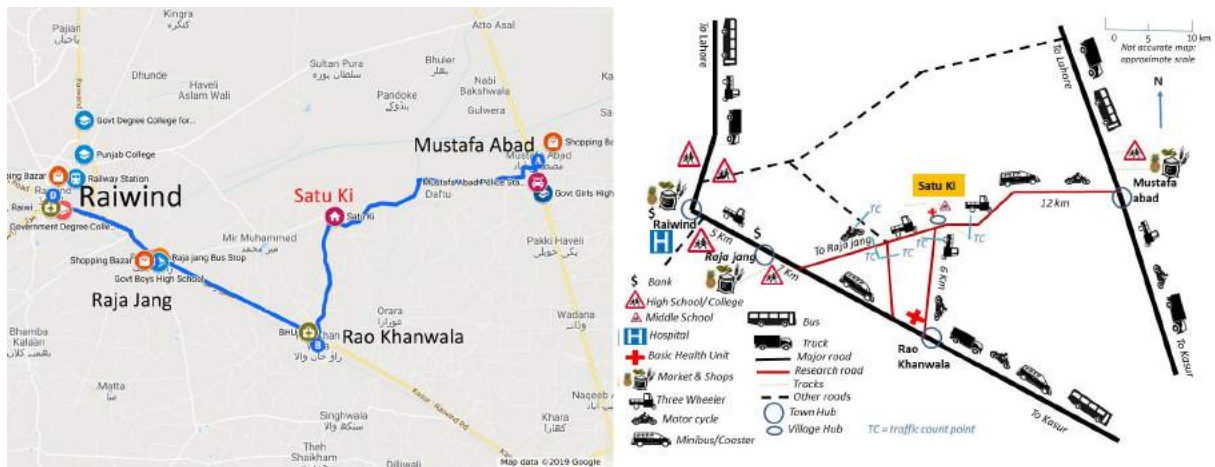


Figure 8 One of the traffic count sites by Satu Ki

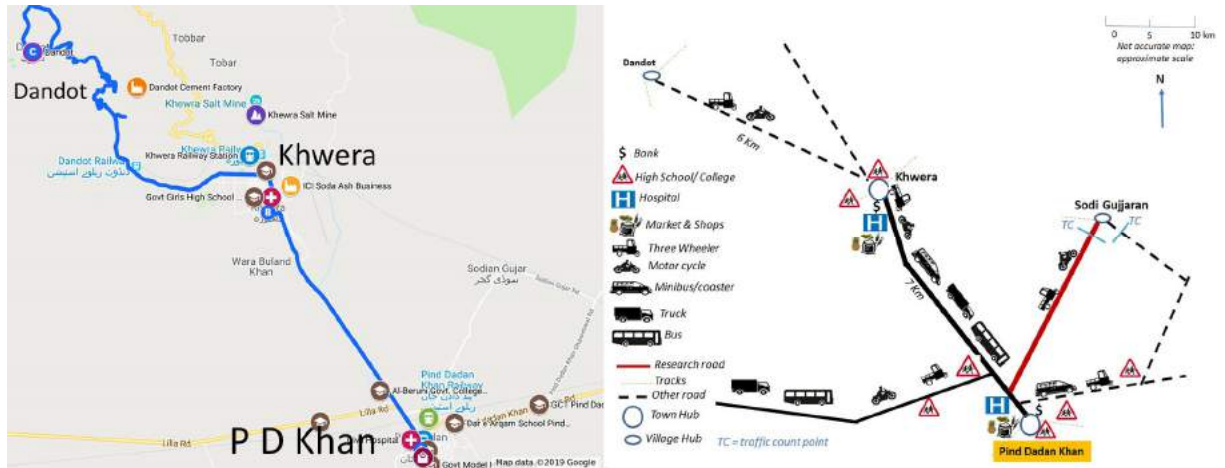


2.2.2 Proposed research site in Jehlum District (northern Punjab)

Pind Dadan Khan (UC #06), known as PD Khan, is a small but busy market town situated in Jehlum District in Rawalpindi Division and has a population of 35,000. It acts as a small hub for about 40-50 villages, up to 25 km away. Villagers come to PD Khan for schools, a clinic, shops and for ongoing bus transport to cities on the main road. There are long-distance bus services to Jehlum and Rawalpindi. The main means of rural transport are private motorcycles and some Qingqis. Some village women reported that they depend on male relatives with motorcycles, and they travel very little, due to lack of public transport. Due to the saline

environment (there are important salt mines and chemical plants in the vicinity), there is little agriculture, and the relatively poor villages depend on various local employment opportunities. There appear to be a variety of health issues in the community, and transport to medical facilities is a concern for many families. Initial discussions with residents suggest that on the small connecting roads, one big issue was poor road condition. On the busy main roads, one concern mentioned was safety, due to speeding vehicles. An indication of the position of PD Khan and the proposed area of research is provided in the maps shown in Figure 9.

Figure 9 Map (left) and schematic diagram (right) of proposed survey site in Jehlum



Initially it had been suggested that the road from the village of Dandot to Khwera and onto PD Khan might be studied (hence the blue line in the left hand map of Figure 9). However, during the April visit, a more appropriate road was selected running from the rural village of Sodi Gujjaran directly to PD Khan (shown as the red line in the right hand map of Figure 9). The Dandot road was complicated by the large cement factory and a residential compound housing many workers. This made the travel patterns untypical of a rural road. Furthermore, the road from Khwera to PD Khan was a busy, high-volume road serving an international chemical factory, salt mines and the Dandot cement factory. In contrast the Sodi Gujjaran to PD Khan has the characteristics of a rural road, with most traffic being small vehicles carrying people and loads between the villages and the market town, which acts as a transport hub for longer-distance travel.

Another advantage of the Sodi Gujjaran road is that pickups (with enclosed backs and sideways seats) run regular transport services throughout the day, so there will be useful comparative data on this road. Also, very interesting arrangements have been made between the Qingqi and pickup operators that share a transport hub at Sodi Gujjara (see Figure 10). They run to a type of timetable, waiting no longer than twenty minutes, even if the vehicles are not full. They also agree that there should be two or three Qingqis between each pickup departure, so they are sharing the transport market between them. This will be a very interesting situation to study, with possible lessons for other locations.

Figure 10 Transport hub at Soli Gujjaran with pick-ups and Qingis sharing the transport market



The traffic count locations selected on the two roads leading from Sodi Gujjaran are illustrated in Figure 9. Figure 11 illustrates the road when one of the traffic counts was underway.

Figure 11 A traffic count on the road from Soli Gujjaran to PD Khan

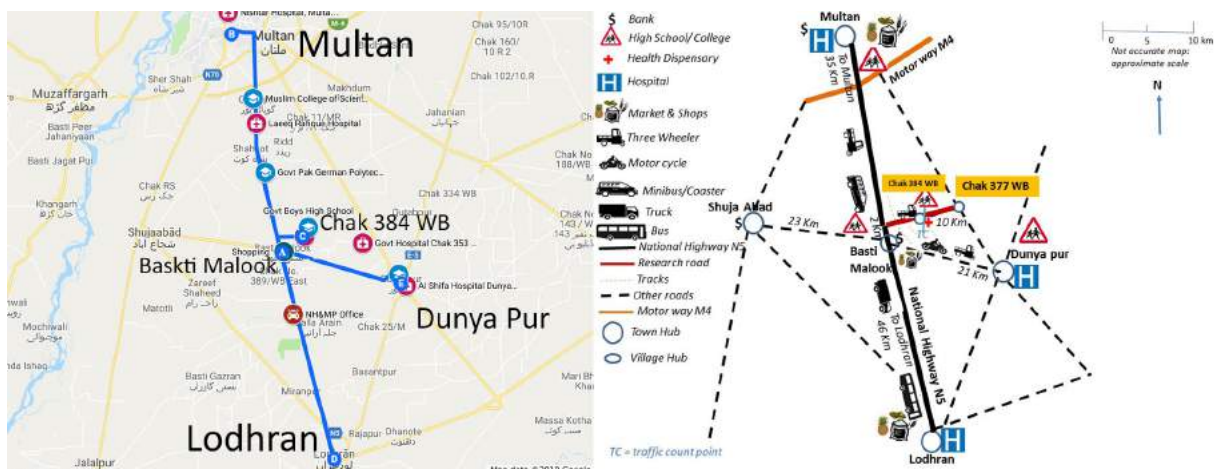


2.2.3 Proposed research site in Lodhran District (southern Punjab)

The survey site in Tehsil Dunyapur, Lodhran District in the Multan Division in southern Punjab was established as an irrigated settlement area in 1929, with most settlers coming from Khushab (300 km away). The whole area comprises a grid of access roads and tracks, with the rural roads (all narrow but paved) zig-zagging through the area with numerous right-angle bends (not shown on the diagrammatic map). The villages are known as Chaks and most are still identified by the numbers they were given during the settlement scheme.

The selected study road starts at Chak 377 WB and passes through Chak 384 WB and on to a national highway (N5) which, on this section, runs from Lodhran (46 km south) to Multan (35 km north). Two kilometres along the highway from the road junction is the busy market town of Basti Malook (20,000 people). Basti Malook is not only on the national highway, but it is also at a crossroads with quite busy roads to Dunya Pur (to the east) and Shujaabad (to the west). Besides its market and shops, Basti Malook has numerous workshops for the servicing of motorcycles and Qingqis. The location of the small villages of Chak 377 and 384 and their context is shown in Figure 12.

Figure 12 Map (left) and schematic diagram (right) of proposed survey site in Lodhran



The rural road section from Chak 377 to the main road is about 10 km, with quite busy rural traffic, mainly motorcycles, Qingqis and animal-drawn carts. The Qingqis have a small transport hub at Chak 377, and generally travel to Basti Malook via Chak 384 as this is a good paved road with transport demand along it. However, with the grid pattern of tracks and roads, there are a vast number of possible route permutations that can be taken. As several people in the villages have jobs in Multan, and many have relatives in Khushab, there is one daily early morning bus to Multan and on to Khushab, with a daily service in the other direction that arrives in the late afternoon.

Figure 13 Transport hub at Chak 377 and traffic around Chak 384 on the road towards Basti Malook



Chak 384 has a population of 2,600 and about 800 ha of agricultural land. Agricultural yields, including wheat and cotton are good, and this seems to be reflected in a relatively high ownership of motorcycles in this and the surrounding villages. The local Qingqi operators reported that their transport market has been declining for several years due to expansion in the numbers of motorcycles. While animal-drawn carts are still common (pulled by a single ox, buffalo, donkey, mule, horse or camel), there has also been an increase in privately-owned 'loader' Qingqis to assist with farm transport, local businesses and family errands.

Chak 377 has a primary school for boys and a high school for girls and Chak 384 has a high school for boys and an elementary school for girls. From initial discussions, it appears the educational drop-out rate is low, including for girls. There is one basic health unit (medical dispensary) in Chak 384 which is not functional. For medical attention, people tend to travel to private clinics in Basti Malook or to hospitals in Multan or Lodhran.

The road and its catchment area will provide an opportunity to research an area with a large number of motorcycles, as well as the implications of a rural road bringing traffic onto a highway in order to reach the local market town. The traffic count locations are illustrated in Figure 12.

2.3 Development of survey instruments

The Team has been developing the survey instruments to be used during the data collection phase. It had been envisaged that the questionnaires would be based on the hub and spoke approach and rapid

transport appraisal methods (Starkey, 2007) and the Rural Transport Services Indicator (RTSi) questionnaires (Starkey et al, 2013a and 2013b). Indeed, the transport hub-and-spoke approach has been integral to the selection of appropriate research sites. The RTSi approaches have also been incorporated, notably, in the purposive selection of diverse types of users to ensure adequate representation of women, older persons, students, people with a disability and people with different transport needs. Following the RTSi methodology, it is acknowledged that users, operators and regulators have different priorities and there is a need to triangulate information obtained from these different sources. With that background, the team visits in April allowed much more focussed questionnaires to be developed, in order to gather data on a variety of issues already identified as being relevant to Qingqis (and alternative means of transport) in Pakistan. The types of data to be collected are summarised in Table 2. The relevant survey forms are provided in Annexes B to F.

The first quantitative surveys were traffic counts which were undertaken in the second half of April. They were 12-hour traffic counts (6 am to 6 pm) carried out over two days, recording all vehicle and pedestrian movements in each direction. The results have yet to be analysed and presented. These counts will provide data on the numbers of Qingqis and their loads, as well as all other forms of transport. This will allow assessment of the different transport options and the traffic mix. The approximate locations of the traffic count locations are provided in Figure 7, Figure 9 and Figure 12. Sample data forms are provided in Annex B.

The user survey will provide information on people's travel patterns and their preferences. There will be 300 forms administered (100 per road). If practicable, half those interviewed will be females (although women are not always very ready to provide information in the villages). There will be purposive sampling to ensure the surveys include students, older persons, people commuting and those with disabilities. The user questionnaire form is attached in Annex C.

The operator surveys will provide data on the different forms of public transport operating on the rural roads, including data allowing estimates of vehicle operating costs. The data-collection forms are attached in Annex D. It is envisaged that all Qingqis and all public transport vehicles operating along the designated roads will be surveyed. On these roads, most operating public transport vehicles are likely to be Qingqis, with a few pickups and minibuses. Where additional comparative data is required, the existing alternatives to Qingqis will have to be surveyed on other roads, and generally these are busier main roads (as higher capacity vehicles tend to operate on higher-volume roads, leaving the low-volume roads to Qingqis, pickups and private motorcycles). Therefore, some data may have to be collected outside the designated survey areas to allow comparisons of tariffs and vehicle operating costs. It is acknowledged that this will be of indirect relevance to the situation on the low-volume roads, but it may be necessary where additional data is required to make comparisons between transport modes.

Additional surveys will also be carried out in the local market towns to gather data on the diversity and mix of Qingqi and auto-rickshaw designs being used in the research districts. The data collection form and a key to common three-wheeler designs are shown in Annex E. It is envisaged it will be possible to record between 50-100 three-wheelers in each of these towns to provide information on the most common and available designs in the three different parts Punjab Province being studied.

Motorcycle owners living in the rural transport catchment areas being studied will also be surveyed. This is because motorcycles are seen to be an important alternative to Qingqis, and their growth in numbers has reduced the rural public transport market, according to some Qingqi operators. However, motorcycles are both a highly gendered means of transport in Pakistan, and also they are known internationally to be a relatively risky means of transport. Therefore, it seems relevant to survey motorcycle owners, to see how their use of motorcycles has affected the transport of family members, notably women and children. The motorcycle owners form is attached as Annex F.

Table 2 Rural road survey data collection for each of the three road catchment areas selected

Indicator	Disaggregation	Data collected	Instrument	Sample size	Comments
Modal share of passengers and freight	All public transport and freight modes. Passenger, Gender, Age (children), Freight	No. pax per day per mode Estimated accompanied and unaccompanied freight per day per mode	Traffic counts with passenger counts and freight estimates. See Annex B.	12-hour traffic count, two week days at strategic points. Options for multiple locations if complicated routings.	No market day surges envisaged but slight traffic changes at weekends
Passenger trips Passenger fares Passenger opinions and preferences	All public transport modes, Passengers for: Gender, Age (students, older persons), Occupations (students, farmers, commuters, etc), Disabilities	Typical OD and frequencies Modes used, Fares paid Transport options, Transport preferences, Opinions on different modes, Safety issues, Accessibility issues	Questionnaires with purposive sampling at roadsides and villages to ensure respondent diversity. See Annex C	100 per road	Questionnaires building upon RTSi examples and disaggregation categories but larger sample sizes and specific questions on Qingqis and alternative options
Vehicle operating costs and profitability on roads	All public transport modes operating on road	VOC components (daily fuel, ownership/hire costs, maintenance, etc). Tariffs charged, typical loads and trips per day, daily income. Regulatory charges etc.	Questionnaires building upon RTSi examples (see Annex E)	If practical, 100% of public transport vehicles operating on surveyed roads, supplemented (if necessary) by up to 10 operators on other roads to allow a minimum of 10 vehicles per alternative mode	Most operating public transport vehicles are likely to be Qingqis, so other modes (minibuses) may have to be supplemented from other roads (different operating circumstances) to allow some comparative data (indirect relevance)
Qingqi operator profiles, regulatory compliance, organisation and safety issues	None	Operator age, family status, education, compliance with registration, licenses, insurance, operator associations issues with ' <i>bhatta</i> ' history of crashes and injuries	Questionnaires for Qingqi operators (See Annex D)	If practical, 100% of Qingqis operating on surveyed roads	The numbers of operators may vary from 10 to 30 per road
Distribution of Qingqi & autorickshaw models	None	Numbers visible of each main type of three-wheeler in use	Survey sheet and key (See Annex F)	50-100 (if available) per survey area including local market town	The various 3-wheeler designs have different functions and advantages
Motorcycle ownership and use patterns (and their implications for Qingqi use)	Owners Family members of owners	Data on ownership and use of motorcycles and implications for Qingqi use by family	Questionnaires for motorcycle owners (see Annex F). Also questions within user survey (Annex C). Focus group discussions	50 households per road	Experience suggests rural men will be happy to answer questionnaires but rural women may be unwilling to discuss such issues through surveys. Hence female focus groups in the villages may be more appropriate
Local perceptions of socio-economic impacts of existing transport modes	All public transport modes Education Health	Opinions of local professionals and leaders about advantages and disadvantages of different transport modes	Key informant interviews.	10 per road (including teachers, medical staff, agricultural extension workers, local dignitaries)	
Local perceptions of regulatory issues of existing transport modes	All public transport modes	Opinions of local police, enforcers and leaders about regulatory issues among the different transport modes	Key informant interviews.	3 per road	Experience suggests there will be few local enforcement officials or people responsible for local regulation

2.4 Preparing for cost benefit analyses

A key aspect of this research will be to undertake outline economic and financial appraisals of the options for improving the current rural transport situation that emerge as a result of the surveys and discussions with key stakeholders. With this in mind, since the Inception Phase, IMC Worldwide, with the support of ReCAP, has increased the involvement of a transport economist in this research.

The economic and financial appraisals will look at the emerging issues from very different perspectives. The economic appraisals will take a public sector (governmental) viewpoint. The financial appraisals will consider the issues from the point of view of the owners/operators of the Qingqis. The purpose of the economic appraisals will be to test the viability of investment in the Qingqis sector, including issues such as greater regulation/enforcement, safety training and better environmental impacts. The financial appraisals will test the viability of investment by Qingqi owners (or other relevant stakeholders) in new vehicles (or upgrades to existing vehicles) or alternative operational procedures.

The purpose of these appraisals will be to assess the costs and benefits of each option considered. Where these costs and benefits can be quantified and monetised, a traditional cost benefit analysis (CBA) will be completed. However, it is likely that some benefits in particular, will be difficult to quantify, and in these cases we will consider a more qualitative, descriptive approach.

Quantified economic appraisals, will focus on identifying the key cost and benefit streams, in resource terms. It will be important to differentiate between financial costs and benefits, and economic costs and benefits (specifically with respect to the treatment of taxes and other transfer payments). Many of these costs and benefits will need to be assessed based upon primary research, as relevant and accurate published data is unlikely to be available. The initial Operator Surveys (see Annex D), User Surveys (see Annex C) and Motorcycle Surveys (Annex F) will gather some basic quantitative and qualitative data on the various rural transport demand and supply issues, service patterns and operating costs of existing rural transport services. These can be supplemented, as required, by a mix of formal interviews with owners, operators and users to collect further more detailed information on usage, demand, operating costs and tariffs that may be required. These formal interviews can be supplemented by less formal discussions with similar groups, with the aim of collecting further information that will help to calibrate the economic and financial appraisal models. These discussions will focus more on the competitive position of the Qingqis, issues of operator training and collaboration, the likely consequences of the different options, and possible changes in operating systems and costs.

3 Risk Analysis and Mitigation Measures

3.1 Security plan and mitigation measures

The IMC security plan is in place, and mainly affects the movements of the Team Leader while working in Pakistan. IMC provides a vehicle and close protection officer for all the Team Leader's airport transfers, field visits and meetings with stakeholders. IMC obtains clearance for such visits from the Punjab security services. Due to the increased tension on the Pakistan-India border since February 2019, the Team Leader may not go closer than 20 km from the border zone. This had a small impact during the recent visits as one of the five roads being surveyed in Kasur (Sataki) runs in the direction of the border zone. The Team Leader therefore concentrated on visiting the other four roads in this area (see Figure 7), although the Pakistani team members were not restricted in this way. This minor issue will not compromise the quality of the research and its outputs.

3.2 Risk analysis

The following risks (Table 3) have been identified.

Table 3 Risk analysis and mitigation strategy

Risk	Probability	Impact	Effects	Mitigation strategy
Pakistan security situation worsens	Medium	Medium to High	Team Leader and Transport Economist unable to visit Pakistan, field data collection difficult	Good team mutual understanding and good electronic links between Team Leader and team to allow continued joint work (TL participating remotely)
TL or Transport Economist problems with visas and/or provincial non objection permit	Low	Medium	Team Leader unable to visit Pakistan or visits delayed	Good team mutual understanding and good electronic links between Team Leader and team to allow continued joint work (TL participating remotely)
TL or Transport Economist problems with conflicting work schedules	Low	Low	TL visits or reporting delayed	Good and efficient work planning, good team work and appropriate delegation of responsibilities.
Changes in travel patterns due to Ramadan (begins on 6 May ends on 5 June) and the hot months (May to July) and rains (July to Aug)	High	Medium	People's travel patterns may change and their willingness to be interviewed may change	Carry out all traffic counts before 5 May, and implement as many of the on-road surveys as practicable by this time too. Subsequently, be prepared to be flexible with timing of surveys, focus groups and interviews.
Adverse publicity or strong negative opinions on Qingqis expressed in opposition to this research project	Low	Low	Value of discussions and debates (including workshop) reduced	Team extremely tactful in its engagements, emphasising objectivity, the presentation of evidence from local stakeholders and presentation of appropriate policy options

4 Next Steps and Work Schedule

4.1 Suggested revisions to schedule of outputs

During recent discussions in Pakistan with NTRC and other stakeholders, it has been recommended that the next visit of the Team Leader and Transport Economist to Pakistan should start in mid-June. This is because Ramadan will take place from 6 May to 5 June. During Ramadan, normal daytime activities are greatly reduced, particularly in the hot afternoons. Long-distance driving to village sites is really only feasible in the mornings which makes travel schedules and research more difficult and time-consuming. As Ramadan progresses, people tend to become less involved in normal day-to-day routines, and concentrate more on Ramadan and preparations for the final feasting. Ramadan ends on 5 June, when Pakistan takes a collective week off for Eid ul Fitr. Although the weather will be hotter in mid-June, the prospects for effective research are said to be much greater than during Ramadan.

This issue, and its possible effects on the work schedule, has already been raised with the ReCAP PMU by IMC Worldwide. It was therefore suggested by IMC to adjust the schedule of all the outputs after the Progress Report to allow the Team Leader and Transport Economist to visit Pakistan in mid-June (tentatively 13-28 June for the Team Leader). There should then be four weeks before the submission of the Draft Final Report to allow for additional data collection and analysis. So the new Draft Final Report milestone date is suggested to be 24 July. The Workshop will be provisionally scheduled for 20 August, to allow time for the Draft Final Report to be reviewed, revised, approved and circulated to NTRC and stakeholders in Pakistan before the workshop. The Workshop Report would be submitted on 11 September and the Final Report on 3 October. The final output, the academic paper should be submitted after the Final Report, and the suggested date is 23 October. The proposed revised timetable of outputs is presented in Table 4.

Table 4 Revised timetable of outputs

Output	Payment milestone	Contract timing	Revised timing	Justification/Remarks
Inception Report	1	4 Feb 2019	4 Feb 2019	Delivered (no change)
Conference paper prepared	2	31 Mar 2019	31 March 2019	Delivered (no change)
Interim Progress Report	3	30 Apr 2019	30 April 2019	Delivered (no change)
Draft Final Report		1 Jul 2019	26 July 2019	To allow team leader and transport economist to postpone their next visit until mid-June after Ramadan and Eid. Draft Final Report to be submitted four weeks after this visit to allow time for additional data collection and analysis.
Stakeholder workshop		c. 23 July	c. 20 Aug 2019	Sufficient time to allow the Draft Final Report to be reviewed, revised and approved and then circulated prior to the workshop (based on recent ReCAP experiences).
Workshop Report	4	16 Aug 2019	11 Sep 2019	Due to the later date of the workshop.
Final Report	5	6 Sep 2019	2 Oct 2019	Cumulative impact of previous changes.
Academic Paper	6	6 Sep 2019	23 Oct 2019	Separation from the date of the Final Report (and cumulative impact of changes due to Ramadan)

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Annex A: Team presentation to NTRC (10 April 2019)

AsCAP **IMC** worldwide **UKaid**



Qingqi three-wheelers for rural transport services in Punjab, Pakistan

Paul Starkey Team Leader
Dr Zahara Batool Senior Researcher
Waqas Younis Researcher

10 April 2019, National Transport Research Centre, Islamabad, Pakistan

AsCAP

Outline of presentation

- Overview of rural transport services in Asia
- Examples of three-wheelers in other countries
- Qingqis in rural Punjab research project
- Issues about Qingqis in Pakistan
- Discussion



10 April 2019, National Transport Research Centre, Islamabad, Pakistan

Paul Starkey, Zahara Batool and Waqas Younis
Qingqi three-wheelers for rural transport services in Punjab, Pakistan

AsCAP

Explanation and disclaimer

- This is an early stage of the research project
- We are asking questions and gaining ideas rather than giving recommendations at this stage
- There are few photos from Pakistan because of the limited time available to prepare them
- More comprehensive presentations will be made at a workshop in July



Rural men and women want transport services that are:

- Timely
- Affordable
- Carry goods
- Appropriate and safe

In many countries it is illegal to mix passengers and freight!



10 April 2019, National Transport Research Centre (NTRC), Islamabad

rural transport services


Transport is a gender issue
Rural women generally want transport services that are:



Timely (guaranteed same-day return is a key gender issue)
Affordable: women often have less access to money for transport
Appropriate and safe (crowded vehicles can be threatening)
Allow multi-tasking journeys

AsCAP **Rural transport services**

- Buses (mainly inter-urban roads)
- Minibuses (need quite good infrastructure)
- Jeeps and rural taxis



AsCAP Pakistan rural transport services

- Coasters: mainly inter-urban, for commuters or for private company use

AsCAP Rural transport services

- Passenger trucks and passenger pickups (strong, very flexible and appreciated)

10 April 2019, National Transport Research Centre, Islamabad, Pakistan

Paul Starkey, Zahara Batool and Waqas Younis
Qingqi three-wheelers for rural transport services in Punjab, Pakistan

AsCAP Pakistan rural transport services

- Pickups used for village transport services and as school 'buses'

AsCAP Rural transport services

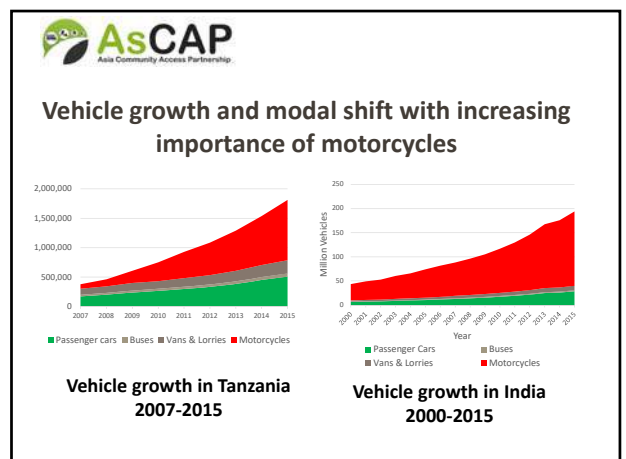
- Motorcycles and motorcycle taxis
 - Transforming rural transport in many countries
 - Villages 2 km from road can be 'on the road'

10 April 2019, National Transport Research Centre, Islamabad, Pakistan

10 April 2019, National Transport Research Centre (NTRC), Islamabad

AsCAP Pakistan rural transport services

- Motorcycle taxis are not a normal means of public transport in Pakistan, and motorcycles are mainly for personal and family use



AsCAP Rural transport services

- Bicycles, tricycles



- Animal power



10 April 2019, National Transport Research Centre, Islamabad, Pakistan

AsCAP Pakistan rural transport services

- Animal power



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Qingqi three-wheelers for rural transport services in Punjab, Pakistan

AsCAP Rural transport services

- Power tillers



- Three wheelers



AsCAP Rural transport services characteristics


- Informal sector, some associations
- Often owner-operators or operators renting vehicles on daily basis
- Often old vehicles (low capital costs)
- Need full (or over-full) loads to cover costs and make modest operating profit
- Wait for full load (inconvenient, large vehicles problematic, small vehicles higher fares)



10 April 2019, National Transport Research Centre (NTRC), Islamabad


AsCAP Rural transport services issues

- Most rural people want transport that carries people and small freight (mixed transport)
- Availability/frequency and price are crucial
- Safety looks very poor, but little evidence of key concern (insufficient disaggregated data)
- Enforcement weak as rural enforcers sympathetic (some corruption)
- Cartels can be serious problem (eg, Nepal).



AsCAP Rural transport services authorities

- Small and underfunded (compared to roads agencies)
- Urban based, urban perspectives
- Concentrate on administrative regulation
- May engage with urban and inter-urban transport services
- Often not present at devolved rural level
- Any rural regulation is negative prohibition
- No proactive positive planning for rural transport





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Qingqi three-wheelers for rural transport services in Punjab, Pakistan



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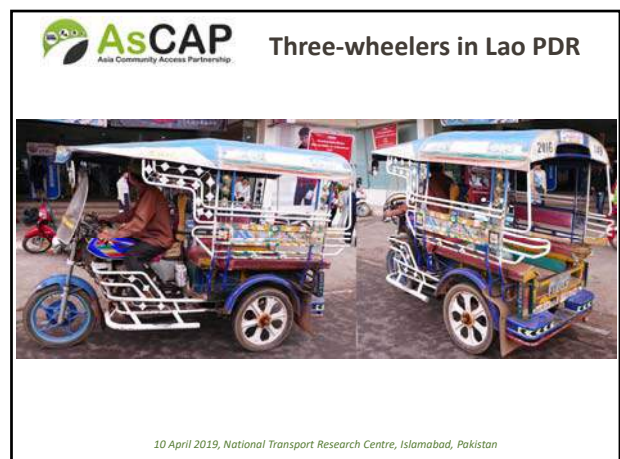


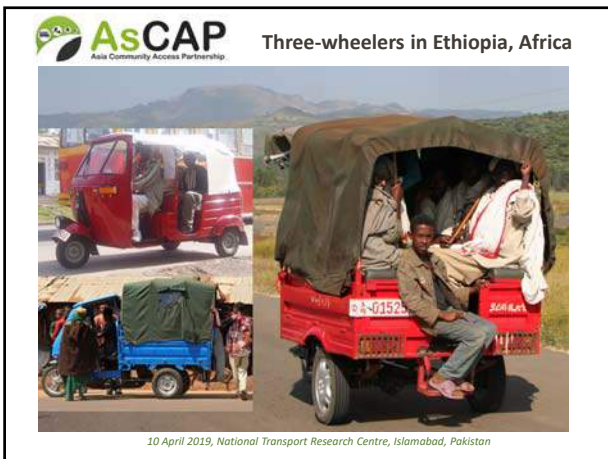


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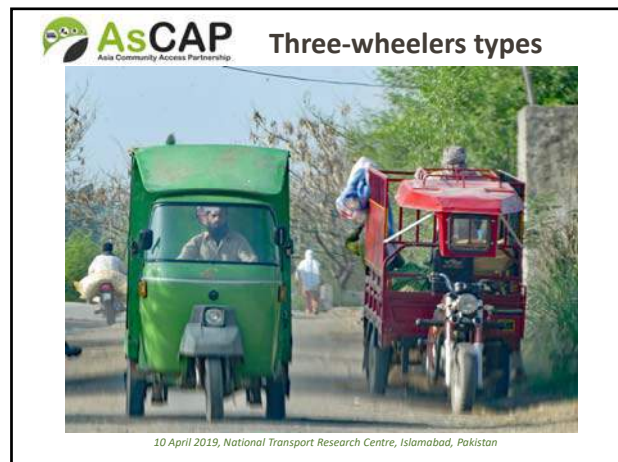


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Qingqi Research Project

- To conduct a detailed investigation into Qingqis as a mode of rural public transport in Punjab
- To consider technological (including power options), economic, social (including gender), legal, safety and environmental aspects of Qingqis and their implications.
- To consider alternative options to Qingqis for public transport, and their relative advantages and disadvantages

AsCAP
Asia Community Access Partnership

Qingqi Research Project: draft schedule

- Inception Report 4 Feb 2019
- Interim Report 30 Apr 2019
- Draft Final Report 1 Jul 2019
- Stakeholder workshop 29 Jul 2019
- Workshop Report 19 Aug 2019
- Final Report 6 Sep 2019
- Academic Paper 30 Sep 2019
- Conference presentation 10 Oct 2019

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Qingqi Research Project

- Rural mobility for different people and their goods
- Characteristics of the rural Qingqi 'niche' and market share
- Performance indicators for Qingqis and main alternatives
- Different stakeholder views about the transport options
- Appropriateness of the current vehicles
- Qingqi supply and maintenance systems.
- Profile of the operator
- Profitability of the operations
- Appropriateness of the tariffs
- Relevance of the regulatory framework
- Compliance and enforcement
- Safety and security

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Qingqi Research Project: rural surveys

- PD Khan, Jhelum
- Kasur, Kasur
- Dunya Pur, Lodhran

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Qingqi Research Project

- Kasur research area

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Qingqi Research Project

- Jhelum research area

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Qingqi Research Project

- Lodhran research area

Rapid appraisal survey methodology

- Listening to people
- Transport users (men, women, young, old, people with disabilities)
- Transport operators (all modes)
- Supporting services
- Transport regulators

Qingqi Research Project: surveys

- What are the benefits of Qingqis to rural people? (*women, men, children, disability etc*)
- What are the problems with Qingqis? (*perspectives users, operators, regulators and those concerned with development*)
- What are the alternatives now? (*their advantages and disadvantages*)

Qingqi Research Project: key informants

- What are the advantages and disadvantages of Qingqis for rural transport?
- How could the disadvantages be reduced? (*design, operators and operations, tariffs, frequency, training, enforcement, compliance, etc*)
- What are the alternatives?
- Are they better overall for rural people?
- Are they viable?

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Qingqi three-wheelers for rural transport services in Punjab, Pakistan

Qingqi Research Project: key issues

- Operator behavior
- Qingqi operations
- Qingqi design
- Qingqi maintenance
- Qingqi regulatory environment
- Qingqi self-regulation
- Qingqi compliance
- Qingqi enforcement
- Qingqi image
- Environmental issues
- Gender issues

Gender issues



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10 April 2019, National Transport Research Centre (NTRC), Islamabad

Qingqi Research Project: context

- Motorcycles, cars, trucks etc
- Aggressive and selfish driving
- Non-compliance with regulations
- Overloading
- Speeding
- *Bhatta*

National Transport policy vision

- **Provide safe, affordable, efficient, durable, and environmentally friendly means of transport, ensuring reliable access to jobs, markets, education, and other services for all.**
- **Provide safety:** improving safety
- **Affordable:** creating a transport system that is inclusive to everyone.
- **Efficient:** a system which minimizes travel time and costs for its users.
- **Durable:** able to be sustained over time
- **Friendly:** reduces the environmental impact of the transport system
- **Means of transport:** recognizes that all modes are involved.
- **Ensuring reliable access:** connecting individuals/goods in rural areas reliably.
- **Jobs, markets, education and other services:** access to these services to reduce poverty and social exclusion, bring goods to market, drive socio-economic growth.
- **For all:** irrespective of location, income, gender, age, race, or disability



Thank you for your attention

Paul Starkey **Dr Zahara Batool** **Waqas Younis**
Team Leader *Senior Researcher* *Researcher*

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 Join the ReCAP Group on LinkedIn

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Qingqi three-wheelers for rural transport services in Punjab, Pakistan

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Annex B: Traffic count forms

Annex C: User survey forms

Research Study on Qingqi rickshaws as a form of rural transport services in Punjab: USERS PERSPECTIVE QUESTIONNAIRE

Village: _____ Road: _____ Date: _____ Surveyor: _____

Section A: Personal Information

Gender: M F Occupation: _____ Education: _____ Family income range (PKR):
 Any disabilities: _____ > 50,000 50,000-100,000 <100,000
 Age: _____ Marital status: _____ Does your household own one (or more) car or other (similar) vehicle? Yes No
 If so give brief details _____
 Does your household own one (or more) motorcycles? Yes No If yes, how many motorcycles in the household? _____
 Are female relatives carried on the motorcycle (s)? Yes No If yes, how many times (in a week)? _____

Section B: Travel Information

U1. Please provide the information below for each mode of transport you have used to travel away from your village in the past year
 (Please record at least 2 different origins and destinations if possible)

Mode	Origin	Destination	Distance km	Journey time (mins)	Purposes	Frequency per month	Hire cost (one way)
Family motorcycle							
Family car							
Carry van							
Rent-a-car							

U2. Please provide the information below for each public mode of transport you have used to travel away from your village in the past year

<i>Mode</i>	<i>Origin</i>	<i>Destination</i>	<i>Distance km</i>	<i>Journey time (mins)</i>	<i>Purposes</i>	<i>Frequency per month</i>	<i>Normal fare (one way)</i>	<i>Normal waiting time (mins)</i>	<i>Accompanied freight (20-50 kg) Size/Weight</i>	<i>Tariff</i>
Qingqi										
Pickup										
Coaster or Hiace (<i>specify</i>)										
Large bus										

U3. Do you ever send unaccompanied freight from or to your village in a Qingqi? If so, please provide

<i>Mode</i>	<i>Origin</i>	<i>Destination</i>	<i>Distance (km)</i>	<i>Type of goods</i>	<i>Frequency per year</i>	<i>Approximate weight</i>	<i>Tariff for this weight</i>	<i>Cost to hire whole Qingqi to carry this</i>
Qingqi								

U4. While taking these journeys travelling from or to your village in the past year, were you, or a member of your family, involved in a crash or safety incident (or security incident) that involved you losing money, requiring medical attention or has affected your family life? Yes/ No If yes, please provide the following information.

Modes of transport	No. of safety incidents ¹ (in the last one year)		Modes of transport	No. of Safety incidents ¹ (in the last one year)		No. of Security incidents ² (in the last one year)
	Crashes	Near-miss		Crashes	Near-miss	
<input type="checkbox"/> Family motorcycle ³			<input type="checkbox"/> Carry van			
<input type="checkbox"/> Family car			<input type="checkbox"/> Rent-a-car			
<input type="checkbox"/> Qingqi			<input type="checkbox"/> Hiace			
<input type="checkbox"/> Pickup			<input type="checkbox"/> Coaster/Large bus			

1 Safety incidents involving injuries and/or vehicle damage. 2 Security incidents involving theft, violence, assault or harassment involving that type of vehicle

U4 a. For each safety incident (use additional sheets if necessary):

1 Where was the incident?

- In our village On main road Other (Name of location) _____
 On village-to-town road In town

2 In what type of vehicle were you travelling?

- Motorcycle Qingqi CarryVan Other (specify) _____
 Car Pickup Bus

3 Was another vehicle involved?

- Bicycle Car Pickup Bus Animal cart
 Motorcycle Qingqi CarryVan Tractor Other _____

4 What was the main consequence? (tick all relevant)

- Vehicle damage Minor injuries Severe injuries Fatality

5 What was the main cause of the crash? (tick up to three if relevant)

- Driver error Driver speed Other driver error Other driver speed Overloading Road problem Vehicle problem
 Animal Pedestrian Poor light Dust Load-shifting Use of mobile phone
 Other _____

6 Any other remarks: _____

U4 b. For each security incident

1 Where was the incident?

- In our village
- On village-to-town road

- On main road
- In town

- Other (Name of location)

2 In what type of vehicle were you travelling?

- Motorcycle
- Car
- Qingqi

- Pickup
- CarryVan
- Bus

- Other (specify)_____

3 What was incident:

- Theft
- Harassment

- Violence
- Assault

- Other (specify)_____

4 Was the incident directly related to being a passenger on that type of transport? Y / N

Brief description of incident and consequences _____

Section C: User perspective on Qingqis and alternative modes of transport

U6	By what mode(s) of transport do children in your household travel to school? Tick all relevant options <input type="checkbox"/> Walking <input type="checkbox"/> Bicycle <input type="checkbox"/> Family motorcycle <input type="checkbox"/> Other motorcycle <input type="checkbox"/> Qingqi <input type="checkbox"/> Pickup <input type="checkbox"/> Minivan <input type="checkbox"/> Car <input type="checkbox"/> School bus	
U7	Why is this? <input type="checkbox"/> Convenience <input type="checkbox"/> Price/cost <input type="checkbox"/> Safety <input type="checkbox"/> No other options <input type="checkbox"/> other _____ If your children travel with different modes of transport, briefly explain this _____ _____	
U8	What method (if any) would you prefer? <input type="checkbox"/> Walking <input type="checkbox"/> Bicycle <input type="checkbox"/> Family motorcycle <input type="checkbox"/> Other motorcycle <input type="checkbox"/> Qingqi <input type="checkbox"/> Pickup <input type="checkbox"/> Minivan <input type="checkbox"/> Car <input type="checkbox"/> School bus	
U9	If they introduced Qingqis that had been tested with a handbrake, indicators, working lights and a rear gate, would you be willing to pay 10 Rps extra for a journey? If yes, what about 20 Rps extra for a journey? If yes, what about 30 Rps extra for a journey?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
U10	If they introduced Qingqis with only two people per bench seat (total of four passengers), would you be willing to pay 10 Rps extra for a journey? If yes, what about 20 Rps extra for a journey? If yes, what about 30 Rps extra for a journey?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
U11	If Qingqis only carried six passengers, would you be willing to pay 10 Rps extra for a journey? If yes, what about 20 Rps extra for a journey? If yes, what about 30 Rps extra for a journey?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
U12	If Qingqis travelled every 15 minutes in both directions during the day whether or not they were full, would you be willing to pay 10 Rps extra for a journey? If yes, what about 20 Rps extra for a journey? If yes, what about 30 Rps extra for a journey?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
U13	If pickups only carried ten passengers at a time, would you be willing to pay 10 Rps extra for a journey? If yes, what about 20 Rps extra for a journey? If yes, what about 30 Rps extra for a journey?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
U14	If pickups travelled every 15 minutes in both directions whether or not they were full, would you be willing to pay 10 Rps extra for a journey? If yes, what about 20 Rps extra for a journey? If yes, what about 30 Rps extra for a journey?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No

U15 What is the best thing about Qingqis? (select up to three)

- | | | |
|-----------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------------------|
| <input type="checkbox"/> Convenient | <input type="checkbox"/> Carry goods as well as passengers | <input type="checkbox"/> Suitable for women without access to motorcycles |
| <input type="checkbox"/> Easily available | <input type="checkbox"/> Allow people to travel for work | <input type="checkbox"/> There are no other easy options |
| <input type="checkbox"/> Quick | <input type="checkbox"/> Allow children to reach schools | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Safe | <input type="checkbox"/> Allow people to reach shops | _____ |
| <input type="checkbox"/> Fares are reasonable | <input type="checkbox"/> Allow people to reach medical facilities | |

U16 What is the worst thing about Qingqis? (select up to three)

- | | | |
|-----------------------------------------------|-----------------------------------------------|------------------------------------------------|
| <input type="checkbox"/> Not easily available | <input type="checkbox"/> Fares are expensive | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Too fast | <input type="checkbox"/> Not enclosed | _____ |
| <input type="checkbox"/> Too crowded | <input type="checkbox"/> Low status transport | |
| <input type="checkbox"/> Dangerous | <input type="checkbox"/> Uncomfortable | |

U17 What is the best thing about Pickups? (select up to three)

- | | | |
|-----------------------------------------------|------------------------------------------------------------|---------------------------------------------------------------------------|
| <input type="checkbox"/> Convenient | <input type="checkbox"/> Carry goods as well as passengers | <input type="checkbox"/> Allow people to reach medical facilities |
| <input type="checkbox"/> Easily available | <input type="checkbox"/> Allow people to travel for work | <input type="checkbox"/> Suitable for women without access to motorcycles |
| <input type="checkbox"/> Quick | <input type="checkbox"/> Allow children to reach schools | <input type="checkbox"/> There are no other easy options |
| <input type="checkbox"/> Safe | <input type="checkbox"/> Allow people to reach shops | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Fares are reasonable | <input type="checkbox"/> Price is lower for children | |
| <input type="checkbox"/> Enclosed space | | |

U18 What is the worst thing about Pickups? (select up to three)

- | | | |
|-----------------------------------------------|-------------------------------------------------|------------------------------------------------|
| <input type="checkbox"/> Not easily available | <input type="checkbox"/> Fares are expensive | <input type="checkbox"/> Uncomfortable |
| <input type="checkbox"/> Too fast | <input type="checkbox"/> Waiting times are long | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Too crowded | <input type="checkbox"/> Low status transport | |
| <input type="checkbox"/> Dangerous | <input type="checkbox"/> People travel on roof | |

U19 What is the best thing about motorcycles? (select up to three)

- | | | |
|-------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------|
| <input type="checkbox"/> Convenient | <input type="checkbox"/> Costs are reasonable | <input type="checkbox"/> Allow people to reach shops |
| <input type="checkbox"/> Easily available | <input type="checkbox"/> Allow people to travel for work | <input type="checkbox"/> High status |
| <input type="checkbox"/> Quick | <input type="checkbox"/> Allow children to reach schools | <input type="checkbox"/> There are no other easy options |
| <input type="checkbox"/> Safe | <input type="checkbox"/> Allow people to reach medical facilities | <input type="checkbox"/> Other (specify) _____ |

U20 What is the worst thing about motorcycles? (select up to three)

- | | | |
|----------------------------------------|------------------------------------------------------|------------------------------------------------|
| <input type="checkbox"/> Too expensive | <input type="checkbox"/> Not enough space | <input type="checkbox"/> Uncomfortable |
| <input type="checkbox"/> Too fast | <input type="checkbox"/> Not enclosed | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Dangerous | <input type="checkbox"/> Not very suitable for women | |

U21 What is the best thing about minibuses/buses? (select up to three)

- | | | |
|-------------------------------------------|------------------------------------------------------------|---------------------------------------------------------------------------|
| <input type="checkbox"/> Convenient | <input type="checkbox"/> Fares are reasonable | <input type="checkbox"/> Allow people to reach medical facilities |
| <input type="checkbox"/> Easily available | <input type="checkbox"/> Carry goods as well as passengers | <input type="checkbox"/> There are no other easy options |
| <input type="checkbox"/> Quick | <input type="checkbox"/> Allow people to travel for work | <input type="checkbox"/> Suitable for women without access to motorcycles |
| <input type="checkbox"/> Safe | <input type="checkbox"/> Allow children to reach schools | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Not crowded | <input type="checkbox"/> Allow people to reach shops | |
| <input type="checkbox"/> Enclosed space | | |

U22 What is the worst thing about minibuses/buses? (select up to three)

- | | | |
|-----------------------------------------------|------------------------------------------------------------|------------------------------------------------|
| <input type="checkbox"/> Not easily available | <input type="checkbox"/> Fares are expensive | <input type="checkbox"/> Uncomfortable |
| <input type="checkbox"/> Too fast | <input type="checkbox"/> Waiting times are long | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Too crowded | <input type="checkbox"/> Not suitable for short trips | |
| <input type="checkbox"/> Dangerous | <input type="checkbox"/> Getting back is more of a problem | |

U23 What is the best thing about carry vans? (select up to three)

- | | | |
|-------------------------------------------|----------------------------------------------------------|-------------------------------------------------------------------|
| <input type="checkbox"/> Convenient | <input type="checkbox"/> Costs are reasonable | <input type="checkbox"/> Allow people to reach medical facilities |
| <input type="checkbox"/> Easily available | <input type="checkbox"/> They come when they are needed | <input type="checkbox"/> Allow people to reach shops |
| <input type="checkbox"/> Quick | <input type="checkbox"/> Allow women to travel easily | <input type="checkbox"/> There are no other easy options |
| <input type="checkbox"/> Safe | <input type="checkbox"/> Allow people to travel for work | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> High status | <input type="checkbox"/> Allow children to reach schools | |

U24 What is the worst thing about carry vans? (select up to three)

- | | | |
|-----------------------------------------------|-----------------------------------------|---------------------------------------------------------------|
| <input type="checkbox"/> Too expensive | <input type="checkbox"/> Too fast | <input type="checkbox"/> Not enough space |
| <input type="checkbox"/> Not easily available | <input type="checkbox"/> Not convenient | <input type="checkbox"/> Not very suitable for day-to-day use |
| <input type="checkbox"/> Too much waiting | <input type="checkbox"/> Dangerous | <input type="checkbox"/> Other (specify) _____ |
| | <input type="checkbox"/> Uncomfortable | |






U25 Some vehicles seem crowded, what do you think should be the maximum number of people in/on

Motorcycle (including driver): _____ Pickup (passengers) _____
Qingqi (passengers) _____ Carry-van (passengers) _____






U26 Taking children to school, what do you think should be the maximum number of children in/on

Motorcycle: _____ Pickup _____ Carry-van _____
Qingqi _____

Section D: User Satisfaction Survey on Qingqis






	Very unsatisfied 	Unsatisfied 	No opinion 	Satisfied 	Very satisfied 
U27-1. How satisfied are you with the availability of Qingqis for travel from your village?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U27-2. How satisfied are you with the present passenger fares for Qingqis from your village?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U27-3. How satisfied are you with journey times for Qingqi from your village?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U27-4. How satisfied are you with the service frequency of Qingqi from your village?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U27-5. How satisfied are you with the present convenience of access for elderly and physically challenged people, e.g., those using mobility aids, sticks, crutches, frame or wheelchair?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U27-6. How satisfied are you with the availability of Qingqi for small freight services (20-50kg accompanied goods)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U27-7. How satisfied are you with the present small freight charges for Qingqi?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U27-8. How satisfied are you with courier services/personal errands provided by Qingqi?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U27-9. How satisfied are you with the level of safety of Qingqis on this road? <i>(safety relates to risk of crashes involving injury / damage)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U27-10. How satisfied are you with the level of security of Qingqis on this road? <i>(security includes theft, assault or harassment)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U27-11. How satisfied are you with the level of comfort in terms of seat space?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U27-12. How satisfied are you with the level of comfort in terms of seat type/conditions?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U27-13. How satisfied are you with the level of comfort in terms of number of passengers around you?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U27-14. How satisfied are you with the level of comfort in terms of environment (noise levels/dust/heat)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Very useless	Useless	Neutral	Useful	Very useful
U27-15. How useful you think use of indicators are for Qingqis?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U27-16. How useful you think hand brakes are for a Qingqis?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U27-17. How useful you think Qingqi front gates would be from a safety point of view?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U27-18. How useful you think Qingqi back gates would be from a safety point of view?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Very incon- venient	Incon- venient	Neutral	Con venient	Very con venient
U27-19. How convenient you think Qingqi front gates would be?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U27-20. How convenient you think Qingqi back gates would be?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section E: User Satisfaction Survey on Pickups

	Very unsatisfied 	Unsatisfied 	No opinion 	Satisfied 	Very satisfied 
U28-1. How satisfied are you with the availability of pickups for travel from your village?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U28-2. How satisfied are you with the present passenger fares for pickups from your village?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U28-3. How satisfied are you with journey times for pickups from your village?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U28-4. How satisfied are you with the service frequency of pickups from your village?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

U28-5. How satisfied are you with the present convenience of access for elderly and physically challenged people, e.g., those using mobility aids, sticks, crutches, frame or wheelchair?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U28-6. How satisfied are you with the availability of pickups for small freight services (20-50kg accompanied goods)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U28-7 How satisfied are you with the present small freight charges for pickups?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U28-8. How satisfied are you with courier services/personal errands provided by pickups?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U28-9. How satisfied are you with the level of safety of pickups on this road? (safety relates to risk of crashes involving injury / damage)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U28-10. How satisfied are you with the level of security of pickups on this road? (security issues include theft, assault, harassment)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U28-11. How satisfied are you with the level of comfort in terms of seat space in pickups?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U28-12. How satisfied are you with the level of comfort in terms of seat type/conditions in pickups?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U28-13. How satisfied are you with the level of comfort in terms of number of passengers around you in pickups?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U28-14. How satisfied are you with the level of comfort in terms of environment (noise levels/dust/heat) in pickups?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section F: User Satisfaction Survey on 'buses': Hiace / Coaster /Large bus (circle which one)

	Very unsatisfied 	Unsatisfied 	No opinion 	Satisfied 	Very satisfied 
U29-1. How satisfied are you with the availability of 'buses' for travel from your village?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U29-2. How satisfied are you with the present passenger fares for 'buses' from your village?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U29-3. How satisfied are you with journey times for 'buses' from your village?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U29-4. How satisfied are you with the service frequency of 'buses' from your village?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U29-5. How satisfied are you with the present convenience of access for elderly and physically challenged people, e.g., those using mobility aids, sticks, crutches, frame or wheelchair?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U29-6. How satisfied are you with the availability of 'buses' for small freight services (20-50kg accompanied goods)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U29-7. How satisfied are you with the present small freight charges for 'buses'?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U29-8. How satisfied are you with courier services/personal errands provided by 'buses'?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U29-9. How satisfied are you with the level of safety of 'buses' on this road? (safety relates to risk of crashes involving injury / damage)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U29-10. How satisfied are you with the level of security of 'buses' on this road? (security relates to risk of theft, assault or harassment)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U29-11. How satisfied are you with the level of comfort in terms of seat space in pickups?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U29-12. How satisfied are you with the level of comfort in terms of seat type/conditions in pickups?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U29-13. How satisfied are you with the level of comfort in terms of number of passengers around you in 'buses'?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U29-14. How satisfied are you with the level of comfort in terms of environment (noise levels/dust/heat) in 'buses'?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Annex D: Operator survey forms

**Research Study on Qingqi rickshaws as a form of rural transport services in Punjab
OPERATORS' QUESTIONNAIRE**

Village: _____ Road: _____ Date: _____ Interviewer: _____

Section A: Personal Information

Age: _____ years Education: _____ Marital status: _____

How long have you been driving this type of vehicle? _____ years Do you have a driving license? Yes No
If yes, for how many years have you held it? _____

Other information (optional) _____

Section B: Vehicle information and ownership

1 Vehicle type: Qingqi Pickup Carry Van Hiace Coaster Large bus Other _____

2 Make of vehicle (for Qingqis vehicle = Motorcycle) Model of vehicle.....
Engine capacitycc/litres **Year of manufacture.....** **Vehicle Registration No.....**

*(For Qingqis: Type of body:
Year of manufacture of body:
Workshop that made body:*

3 What fuel do you use? Petrol Diesel CNG 2-stroke petrol

4 How many seats are there?

5 Is there a legal maximum load? Passengers Tonnes

6a Is the vehicle owned by the Driver? Yes No (If Yes)
Year of purchase..... Total purchase cost PKR Estimated current value PKR.....

6b Is the vehicle owned on hire purchase by the driver? Yes No (If Yes)
Year of start of purchase..... Deposit paid: PKR Each instalment PKR
Number of instalments Estimated current value PKR.....

6c Is the vehicle owned by another person and hired by the driver? Yes No (If Yes)
What is the hire cost: PKR..... per day / week / month
Estimated current value PKR.....
Who pays the costs of maintenance and repairs? Driver Owner
Other arrangements?.....

6d Is the vehicle owned by another person that the driver works for? Yes No (If Yes)
How are revenues split between owner and driver?
Profits go to Driver and owner is paid PKR per day or PKR per month or
Profits go to Owner and driver is paid PKR per day or PKR per month or
Other arrangement explain
Estimated current value PKR.....

7 For Qingqis and auto-rickshaws only

Do you have working indicators? Yes No Do you have a hand brake? Yes No
Do you have working lights? Yes No Do you have rear traffic mirrors? Yes No
Do you have rear reflectors? Yes No Do you have face screen? Yes No
Do you have front or rear passenger gates? Yes No Other information (optional):

Section C: Vehicle operating patterns

- 8 Does the vehicle usually operate on fixed route?** Y / N. If so what is the route?
 From..... To..... Distancekm. Journey timemins
- 9 What is the normal passenger fare for this journey?** PKR.....
 What is the fare for children on a seat? PKR.....
 What is the fare for someone with disabilities? PKR.....
 What is the charge for carrying a 20 kg sack of produce? PKR..... ; a 50 kg sack of produce? PKR.....
 What is the tariff if someone hires the whole vehicle for this single journey? PKR.....
- 10 On average, how many paying *single* trips do you make per day?** per day
(a return trip = 2 single trips)
On average, how many paying *single* trips do you make per week?per week
- 11 What was the last paying single trip you had?**
 From..... To..... Distancekm. Journey time.....mins
 Total fare/freight revenue PKR No of passengers..... Kilograms of freight carried (approx.)kg
- 12 Over the last month what was the average gross revenue per day?**
(gross revenue is total of all fares and all freight tariffs, with no deductions for fuel, etc)
What is your average gross revenue each month? PKR
- 13 What would you estimate your monthly income/profit from your transport operations?** PKR
(this is gross revenue minus fuel and other costs)
- 14 Does the vehicle provide a school run service?** Y / N. If so what is the route?
 From..... To Distance km Journey time.....mins.
 Number of single trips per school day *(single trip = trip to school with pupils or from school with pupils)*
 No of days per week in term time..... Number of pupils per trip Monthly fare per pupil PKR
- 15 On average, what distance do you travel each day and each week?** km/day km/week
- 16 On average, how much fuel do you use in your operations?**
 PKR..... per day; litres/day
 PKR per week; litres/week
- 17 Please estimate your maintenance & repair costs:** PKR per month. PKR per year
 What is the cost of a front tyre? PKR ; What is the cost of a back tyre? PKR
- 18 What percentage of vehicle revenue comes from passengers, freight or from driver/owner's trading?**
 Percentage of revenue from passengers% goods% business on own account%
- 19 Do you have assistants or conductors?** Number How are they paid? PKR per week
(or percentage of gross profit.....%; or other system)
- 20 Do you have vehicle insurance?** Yes No If so, PKR per year
Do you have annual vehicle tests? Yes No If so, PKR per year
Do you pay annual registration for your vehicle? Yes No If so, PKR per year
Do you pay for a route license for your vehicle? Yes No If so, PKR per year
- 21 Are you a member of a driver association?** Yes No
If yes, how much does this cost? PKR per week PKR per month
Does your association do any of the follow? (tick all that apply)
- | | | | |
|---------------------------------------------|----------------------------------------------------------|----------------------------------------------|----------------------------------------------------------|
| Control the order of departure | <input type="checkbox"/> Yes <input type="checkbox"/> No | Provide support in the case of illness | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Control fares | <input type="checkbox"/> Yes <input type="checkbox"/> No | Provide support in the case of a crash | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Control who can operate on different routes | <input type="checkbox"/> Yes <input type="checkbox"/> No | Provide support in the case of police action | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Control the time between departures | <input type="checkbox"/> Yes <input type="checkbox"/> No | Negotiate with officials in the nearby town | <input type="checkbox"/> Yes <input type="checkbox"/> No |

22 How many different operators are sharing the public transport market on your main route each day?
 Qingqis..... Pickups Hiace Coaster Large bus..... Other (specify).....

- | | | | | | | |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 23 | During the past year, has the number of your type of public transport vehicles operating each day along your routes changed? | Big decrease | Small decrease | No change | Small increase | Big increase |
| | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 24 | During the past year, has the number of daily trips that you and your type of vehicle operating along your routes changed? | Big decrease | Small decrease | No change | Small increase | Big increase |
| | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 25 | During the past year, has the total number of passengers carried each day by all public transport vehicles operating along the road changed | Big decrease | Small decrease | No change | Small increase | Big increase |
| | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

26 What has been the main causes of the changes? (Tick all important changes)

- | | | | | |
|-----------------------------|------------------------------|--------------------------------------|------------------------------|-----------------------------|
| More people travelling | <input type="checkbox"/> Yes | More use of Pickups | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <input type="checkbox"/> No | | | | |
| Fewer people travelling | <input type="checkbox"/> Yes | More use of Hiace /Coaster/ Buses | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <input type="checkbox"/> No | | | | |
| More use of motorcycles | <input type="checkbox"/> Yes | More use of carryvans and rent-a-car | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <input type="checkbox"/> No | | | | |
| More use of Qingqis | <input type="checkbox"/> Yes | Other (specify) | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <input type="checkbox"/> No | | | | |

27 Do you get stopped or hassled by police or other officials? Yes No
 (If Yes) How often? times per month. times per year

If yes, what are the main reasons? (tick all that apply)

- | | |
|-------------------------------------------------------|---------------------------------------------------------|
| <input type="checkbox"/> No reason at all | <input type="checkbox"/> Stopping in wrong place |
| <input type="checkbox"/> Overloading: too many people | <input type="checkbox"/> Driving in the wrong direction |
| <input type="checkbox"/> Overloading: too big a load | <input type="checkbox"/> Speeding |
| <input type="checkbox"/> Faulty lights | <input type="checkbox"/> |
| | Other _____ |

28 How much do you have to pay in 'bhatta' to officials/police per month? PKR per month

29 What are the big problems you face when operating on your normal route(s)? Tick all that are important.

- | | |
|--------------------------------------------------------------|-----------------------------------------------------------------------------|
| <input type="checkbox"/> Declining market | <input type="checkbox"/> Too much competition from other vehicle types |
| <input type="checkbox"/> Increasing ownership of motorcycles | <input type="checkbox"/> Harassment from police/officials |
| <input type="checkbox"/> Other (specify): _____ | <input type="checkbox"/> Too many of your type of vehicles on your route(s) |

27. How many crashes/accidents (safety) and security incidents have you been involved in on this route during the last year in your mode of transport?

Safety¹..... **Security**²¹ *Accidents/crashes involving injury to you or your passengers or damage to your vehicle.* ² *Security incidents involving theft, harassment or assault.*

27 a. For each safety incident (use additional sheets if necessary):

1 Where was the incident?

In our village On village-to-town road On main road In town Other (Name of location _____)

2 In what type of vehicle were you travelling?

Motorcycle Car Qingqi Pickup CarryVan Bus Other (specify)_____

3 Was another vehicle involved?

Bicycle Motorcycle Car Qingqi Pickup CarryVan Bus Tractor Animal cart Other_____

4 What was the main consequence? (tick all relevant)

Vehicle damage Minor injuries Severe injuries Fatality

5 What was the main cause of the crash? (tick up to three if relevant)

Driver error Driver speed Other driver error Other driver speed Overloading Road problem Vehicle problem
 Animal Pedestrian Poor light Dust Load-shifting Use of mobile phone
 Other_____

6 Any other remarks:_____

27 b. For each security incident

1 Where was the incident?

In a village On village-to-town road On main road In town Other (Name of location)_____

2 In what type of vehicle were you travelling?

Motorcycle Car Qingqi Pickup CarryVan 'Bus' Other (specify)_____

3 What was incident:













Theft Harassment Violence Assault Other (specify)_____

4 Who was most affected? You / Your passengers / Both / Other_____

5 Brief description of incident and consequences_____

Annex E: Forms and key for surveys of the diversity of three-wheeler designs

Some common designs of Motorcycle rickshaws (Qingqis) and Auto-rickshaws three-wheelers

Motorcycle rickshaws (Qingqis)	Auto-rickshaws
Qingqi passenger – 6-seater	Auto-rickshaw passenger – 3-seater (<i>plus 3?</i>)
	
Qingqi passenger – sideways	Auto-rickshaw passenger – sideways
	
Qingqi freight – cage	Auto-rickshaw freight – cage
	
Qingqi freight – box body	Qingqi freight – box body
	
Qingqi freight – pickup	Auto-rickshaw freight – pickup
	
Qingqi freight – flatbed	Auto-rickshaw passenger – 6-seater (<i>Qingqi</i>)
	
Motorcycle rickshaws (Qingqis)	Auto-rickshaws

Annex F: Motorcycle owners survey forms

**Research Study on Qingqi rickshaws as a form of rural transport services in Punjab
MOTORCYCLE OWNERS QUESTIONNAIRE**

Village: _____ Road: _____ Date: _____ Interviewer: _____

Section A: Personal Information

Age: _____ Occupation: _____ Education: _____ Marital status: _____

How many motorcycles are there in your household? How long have you been driving this type of vehicle? years

Does your household own a car? Yes No Do you have a driving license? Yes No

How many people live in your household? Men Women Children

Other information (if relevant) _____

Section B: Motorcycle information and ownership

1 Make of motorcycle Model of motorcycle
Engine capacitycc Year of manufacture..... Vehicle Registration No.....

2 Did you buy the vehicle directly or on hire purchase? Yes No

If direct

Year of purchase..... Total purchase cost PKR Estimated current value PKR.....

If hire purchase

Year of start of purchase..... Deposit paid: PKR Each instalment PKR
Number of instalments Estimated current value PKR.....

3 Do you have vehicle insurance? Yes No If yes, PKR per year

4a How often do you wear a crash helmet?

Never, Occasionally, If going into town, Most journeys, Always

4b If you carry a female relative, how often do they wear a crash helmet?

Never, Occasionally, If going into town, Most journeys, Always

4c If you carry a child or children, how often do they wear a crash helmet?

Never, Occasionally, If going into town, Most journeys, Always

5 What is the main use of your motorcycle

Commuting to employment Family and domestic transport
 Work-related transport Other _____
 Personal use for mobility

6 How many days a week do you use it? days per week

7 How many kilometres a week do you generally travel? km per week

- 8 On average, how much fuel do you use a week? PKR per week; litres/week
- 9 What is your most common journey?
From..... To..... Distance km Journey time.....mins
- 10 Do you carry children to school regularly? Yes No (If so what is the route?)
From..... To..... Distance km Journey time.....mins
- 11 How many children do you carry to schools on your motorcycle in the morning? children in.... trips
- 12a Do you carry a female relative regularly? Yes No
- 12b If so, which relatives? (tick all that apply)
 Wife Mother Mother-in-law Sister Aunt Other
- 12c What is the main destination/route you carry your female relatives?
From..... To..... Distance km Journey time..... mins
- 13 What are the main reasons you carry your female relatives? (tick all that apply)
 To shops/markets To education To clinics To employment Family visits Other.....
- 14 How many people do you generally carry at a time? adults and children
- 15 What is the maximum number of people you can carry? adults and children
- 16 Please estimate your maintenance & repair costs: PKR per month. PKR per year
- 17 Do you get stopped or hassled by police or other officials? Yes No
(If Yes) How often? per month. per year
(If Yes) what are the main reasons (tick all that apply)
 No reason at all Faulty lights
 Lack of helmet Speeding
 Too many people Driving in the wrong direction
 Too big a load Other_____
- 18 How much do you have to pay in 'bhatta' to officials/police per month? PKR per month
- 19 Since you have owned your motorcycle, do you still use Qingqis?
 Never, Big reduction, Small reduction, Not much change
- 20 Since you have owned your motorcycle, do your female household members still use Qingqis?
 Never, Big reduction, Small reduction, Not much change
- 21 Since you have owned your motorcycle, do children in your household still use Qingqis?
 Never, Big reduction, Small reduction, Not much change

22. How many crashes/accidents (safety) and security incidents have you been involved in during the last year on your motorcycle?

Safety¹.....¹Accidents/crashes involving injury to you or your passengers or damage to your motorcycle.

Security²²Security incidents while with your motorcycle involving theft, harassment or assault.

23 a. For each safety incident (use additional sheets if necessary):

1 Where was the incident?

In our village On village-to-town road On main road In town Other (Name of location _____)

2 In what type of vehicle were you travelling?

Motorcycle Car Qingqi Pickup CarryVan Bus Other (specify)_____

3 Was another vehicle involved?

Bicycle Motorcycle Car Qingqi Pickup CarryVan Bus Tractor Animal cart Other_____

4 What was the main consequence? (tick all relevant)

Vehicle damage Minor injuries Severe injuries Fatality

5 What was the main cause of the crash? (tick up to three if relevant)

Driver error Driver speed Other driver error Other driver speed Overloading Road problem Vehicle problem
 Animal Pedestrian Poor light Dust Load-shifting Use of mobile phone
 Other_____

6 Any other remarks: _____

23 b. For each security incident

1 Where was the incident?

In a village On village-to-town road On main road In town Other (Name of location) _____

2 In what type of vehicle were you travelling?

Motorcycle Car Qingqi Pickup CarryVan 'Bus' Other (specify)_____

3 What was incident:

Theft Harassment Violence Assault Other (specify)_____

4 Who was most affected? You / Your passengers / Both / Other_____

5 Brief descriptions of incident and consequences_____