

Extending National Social Security Fund coverage to Informal Workers in Cambodia

An initiative to enable selected segments of informal workers to join the NSSF

(The case of Tuk-Tuk Drivers)

Final Report

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LIST OF ABBREVIATIONS

CSES	Cambodia Socio-Economic Survey
EU-SPS	European Union – Social Protection Systems
EII	Employment Injury Insurance
HEF	Health Equity Fund
IDEA	Independent Democracy of Informal Economy Association
ILO	International Labour Organization
LMI	Labour Market Intermediary
LFPR	Labour Force Participation Rate
MoLVT	Ministry of Labour and Vocational Training
MSME	Micro, Small and Medium Enterprises
NSSF	National Social Security Fund
OSH	Occupational Safety and Health
QE	Quasi Enterprise
RGC	Royal Government of Cambodia
RMA	Rapid Market Assessment
SHI	Social Health Insurance
SP-IW	Social Protection – Informal Workers

A. INTRODUCTION

1. This report is the result of a study conducted in Cambodia under the Programme 'Supporting the establishment of sustainable and inclusive social protection systems' known as the 'EU-SPS Programme' co financed by the European Union, the Organisation for Economic Co-operation and Development (OECD) and the Government of Finland. The EU-SPS programme aims to support ten partner countries (Cambodia is one of the partner countries) in building social protection systems which deliver progressively higher levels of protection for all people throughout their lifetimes, thereby reducing poverty, vulnerability and inequality. The four-year initiative runs until the end of 2018. ILO is a partner agency in this intervention and ILO Cambodia is collaborating with the EU in an advisory capacity to provide expert inputs on the report. Current work under the programme is aimed at developing evidence based knowledge towards extending Social Protection systems for Informal Workers (SP-IW) in Cambodia.

2. There is a wide diversity of employment arrangements in the informal economy – wage employees, self-employed and casual workers. The ILO and EU-SPS have begun assessments to extend the SP-IW Programme to selected groups of self-employed workers who have expressed an interest in participating in the social security system. To this end, the study focuses on two groups in the informal economy: self-employed represented by Tuk-Tuk drivers and wage employees represented by Domestic Workers. It is envisaged that the studies would serve as templates to better understand the feasibility of extending social protection coverage to different categories of workers in the informal economy. This could ensure easier replication if similar studies were to be undertaken in other sectors.

3. This report discusses the working conditions, socio-economic status and social protection environment of tuk-tuk drivers¹. The report is organized in four sections:

- i. *Section A* is the introductory section which comprises of three sub-sections:
 - A.1. The first sub-section briefly discusses the nature of Cambodia's development paradigm in terms of economic growth and multidimensional development indicators.
 - A.2. The second sub-section outlines the social protection environment of Cambodia and discusses relevant social protection schemes and programs. Relevant international standards and conventions related to social protection are also briefly discussed.
 - A.3. The third sub-section attempts to contextualize tuk-tuk drivers in the present framework of social security system of Cambodia.
- ii. *Section B* outlines the objectives of the present study and the methodology adopted. The analytical framework of the report is also presented in this section.
- iii. *Section C* contains a detailed reporting on survey findings following the analytical framework and brief discussions on these findings.
- iv. *Section D* concludes with remarks on the key observations from the study.

¹ A separate report has been developed as an output of the study on domestic workers

A.1. The country context

4. Over the last two decades, Cambodia has made steady progress on the economic front. It's GDP per capita rose from USD 316.10 in 1993 to an all-time high of USD 1,078.40 in 2016, averaging USD 621.03 during this period². The country's economic growth has mainly relied on four sectors: garments, construction, tourism and agriculture.

5. However, economic growth has not translated to all-round development. The country lags behind in various multidimensional aspects of poverty including child mortality, nutrition, access to basic amenities, access to schooling etc. According to Cambodia Socio-Economic Survey (CSES) 2015, 14% of the population in the age-group of 15-64 years in the labour force had low or no education. Cambodia ranked 143rd in the United Nations Development Programme (UNDP) Human Development Index (HDI) in 2015, with a score of 0.563, the lowest in Southeast Asia (SEA) after Myanmar. In 2014, the multidimensional poverty rate was 33%, more than twice the money metric measure³.

A.2. Social Protection: Cambodian context

6. The Royal Govt. of Cambodia (RGC) recognizes the critical role that social protection can play in reducing poverty and deprivation and weakening the impact of shocks and vulnerabilities. The Constitution of Cambodia provides basic framework for provision of social protection. Article 36 of the Constitution⁴ stipulates that all citizens "shall have the right to obtain social security and other social benefits as determined by law". Social Protection of workers was addressed through labour market programs. The Labour Law (1997) complies with most of the International Labour Organization's (ILO) conventions on core labour standards. Gradually initiatives were institutionalized to scale-up social security of workers in the private sector and eventually expand social security coverage to workers in informal and other non-standard forms of employment as well. The Insurance Law (2000) provides a legal framework for better regulation of insurance market activities⁵. The Law on Social Security Schemes for Persons defined by the Provisions of the Labour Law (2002) entitles all workers defined by the provisions of the Labour Law to medical, disability and survivor benefits.

7. The Law on Social Security for Persons defined by the Provisions of the Labour Law (2002) mandated the establishment of National Social Security Fund (NSSF) for managing all social security schemes within its scope⁶. The NSSF, established in 2008, is vested with the responsibility of providing basic social security to worker in private sectors. Of 8.35 million workers in Cambodia, The NSSF currently covers 1.1 million workers, or 14% of all people employed in Cambodia. This 14% constitute a small proportion of the 49% who are in paid employment. The

² World Bank Tradeconomics.com

³ UNDP 2017. *Human Development Report* published on 21st March 2017, UNDP. Also see, Briefing Notes for Countries on the 2016 Human Development Report: Cambodia.

⁴ Constitution of Cambodia, 1993.

⁵ Sann, V. (2010), 'Social Protection in Cambodia: Toward Effective and Affordable Social Protection for the Poor and Vulnerable', in Asher, M. G., S. Oum and F. Parulian (eds.), *Social Protection in East Asia – Current State and Challenges*. ERIA Research Project Report 2009-9, Jakarta: ERIA. pp.316-345.

⁶ RGC (2002). *Law On Social Security Schemes for Persons Defined By The Provisions of the Labour Law*

remaining 51% predominantly self-employed are legally excluded from current social security benefits. This implies that both self-employed and workers in wage employment in the informal economy are de facto or de jure' excluded from the ambit of the NSSF. The year 2017 saw RGC taking proactive measures such as making employers fully responsible for social protection of workers. One of the key steps was NSSF's recent decision to allow micro and small enterprises with at least one worker to register with it, revising its earlier requirement of enterprises with at least 8 workers to register. This decision make an (estimated) additional 3 million workers become eligible to register with the NSSF⁷.

8. The NSSF's model of Social Security systems was based on the traditional model of employer-employee relationships. Initially, the model required that employers and workers covered by NSSF would have to pay a compulsory contribution to NSSF. In its bid to widen the social security coverage to workers in the informal economy, the RGC announced in 2017 that employers would be fully responsible for social protection of workers. This move required that employers not only pay to NSSF their earlier obligation of 0.8% of the worker's monthly wages as Employee Injury Insurance (EII) and 1.3% of the worker's monthly wages towards Social Health Insurance (SHI)⁸. The employers would not only pay to NSSF their earlier obligation of 0.8% of the worker's monthly wages towards as EII and 1.3% of the worker's monthly wages towards SHI, but also take on the additional responsibility to pay the worker's contribution of an equal 1.3% of the monthly wages towards SHI, thereby making them responsible to pay to the NSSF a total of 3.4% of the worker's monthly wages towards EII and SHI combined.

A.3. Social Protection: International Perspective

A.3.1. The International Labour Organization view

9. The ILO adopts a rights based approach to social protection enshrined in international human rights treaties. According to ILO (2012), social protection is "nationally defined sets of basic social security guarantees which secure protection aimed at preventing or alleviating poverty, vulnerability and social exclusion"⁹. Since the 1950s, Social Security of workers has been the central theme of ILOs numerous conventions. The Social Security (Minimum Standard) Convention 1952, Maintenance of Social Security Rights Convention, 1982, and Maintenance of Social Security Rights recommendation 1983 are worth mentioning.

10. In 2012, Social Protection Floors Recommendation was put forward by the ILO which aims at the rapid implementation of national social protection floors containing basic social security guarantees that ensure universal access to essential health care and income security at least at a nationally defined minimum level. In 2015, ILO adopted *Transition from the Informal to the Formal Economy Recommendation* (No. 204) at the 104th International Labour Conference, which provides a guideline for the protection of the workers in informal sector (Including self-employment and

⁷ ILO 2017. *Initial Operational Review of the Cambodian National Social Security Fund*.

⁸ The EII caters to the Occupational Safety and Health requirements while SHI provides for health care services.

⁹ ILO, 2012. *Social Protection Floors Recommendation*, (No. 202), ILO: Geneva

domestic work) and to facilitate their transition from informal to formal sector¹⁰. The ILO launched a Global Flagship Program on building social protection floors for all in 2016, to universalize social protection floors around the world with an initial target of 21 countries including Cambodia¹¹. To assess the worldwide progress and challenges in respect to the social protection, the ILO has been publishing the *World Social Protection Report* since 2014.

A.3.2. The European Union view

11. While ILO's approach to Social Protection is essentially normative, European Union also emphasizes on the functions of Social Protection in promoting social inclusion. According to the European Commission, "Social protection may be broadly defined therefore as policies and actions that: enhance the capacity of all people, but notably poor and vulnerable groups, to escape from poverty, or avoid falling into poverty, and better manage risks and shocks and aim at providing a higher level of social security through income security and access to essential services (in particular, health and education) throughout active and inactive periods and periods of need throughout the life-cycle." ¹²All member states of the European Union are in principle committed to providing universal access to social protection as stated in Article 34 of the Charter of Fundamental Rights of the European Union.

12. The future direction of EU Development Cooperation in support of social protection in partner countries aims at improving equity and efficiency in provision, while supporting social inclusion and cohesion, as the essential underpinnings of inclusive, sustainable growth and poverty reduction.

13. The Consensus for Development of the EU adopted in 2017 provides the framework of EU's future development policy which will guide the action of EU institutions and Member States in their cooperation with all developing countries. The new European Consensus for Development complements the 2030 Agenda for Sustainable Development¹ (2030 Agenda), adopted by the United Nations in September 2015 and stated that its Member States are committed to a life of dignity for all that reconciles economic prosperity and efficiency, peaceful societies, social inclusion and environmental responsibility. In doing so, efforts will be targeted towards eradicating poverty, reducing vulnerabilities and addressing inequalities to ensure that no-one is left behind¹³.

¹⁰ ILO, 2015. Transition from the Informal to the Formal Economy Recommendation (No. 204). ILO also adopted a Resolution concerning efforts to facilitate the transition from the informal to the formal economy.

¹¹ ILO, 2016. Building Social Protection Floors for all: ILO Global Flagship Programme, ILO Website <http://www.social-protection.org/gimi/gess/Flagship.action>

¹² European Commission, 2012. *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions*. Available at <http://ec.europa.eu/transparency/regdoc/rep/1/2012/EN/1-2012-446-EN-F1-1.Pdf>.

¹³ EU 2017. *The New European Consensus on Development 'Our World, Our Dignity, Our Future'* Joint statement by the council and the representatives of the Governments of the Member states meeting within the Council, the European Parliament and the European Commission. Available at https://ec.europa.eu/europeaid/sites/devco/files/european-consensus-on-development-final-20170626_en.pdf.

A.4. Tuk-Tuk drivers and Social Protection

14. Tuk-tuks are a popular mode of urban transportation within the Cambodian cities. These are two-wheeled carriages pulled by motorbikes that can carry from two people to entire families. Their official name is remorque, or “trailer” in French but are colloquially known as tuk-tuks (the word was first made popular in Thailand).

15. With Cambodia witnessing steady growth, its economic hub Phnom Penh is expanding fast. The population of Phnom Penh is likely to increase to 2.4 million in 2020 and employment of which 1.2 million persons would be in employment in accordance with the population increase¹⁴. This is already driving up the demand for urban transportation and such demand is expected to continue increasing steadily. But public transport infrastructure is weak, except for the availability of para-transit modes such as Motorumok (“tuk-tuk”) and Motorbike Taxis there are no convenient and comfortable public transport mode in the city. Three sub-segments of para-transit modes which are driven by self-employed informal economy workers were chosen for this study:

- i. Traditional tuk-tuk drivers
- ii. Modern tuk-tuk drivers
- iii. Motorbike Taxi (“Motodop”) drivers

16. While the growth in commuters would otherwise augur well for the tuk-tuk driving business, the earnings of tuk-tuk drivers are steadily declining over the years¹⁵. This is mostly because of a large increase in number tuk-tuks in Phnom Penh. In 2017 there were about 10,000 tuk-tuks¹⁶ plying in Phnom Penh, up from about 2,000 tuk-tuks plying in 2007¹⁷. This means over the last ten years there has been a five-fold increase in the number of tuk-tuks plying in Phnom Penh. Entry barriers are relatively low in this sector for job seekers whose livelihoods may have been affected in other sectors or who may be looking to pick up some money when not engaged elsewhere.

17. Competition in the segment is also starting to take shape. Modern, smaller-in-size, Liquefied Petroleum Gas (LPG) fuelled three-wheeled tuk-tuks have started plying in Phnom Penh. These are imported from India and assembled in Cambodia. For the purpose of this study, we have termed them “modern” tuk-tuks to differentiate them from the “traditional” tuk-tuks.

18. “Motodops” or motorcycle taxis are low-cost public transport in Cambodian cities. It is an unregulated mode of urban transportation. The customer pillion rides the drivers, who are almost exclusively male. Fares are negotiated between the customer and driver. It varies on the distance covered and the weather but is cheaper than a tuk-tuk.

¹⁴ JICA (2014). *The project for Comprehensive Urban transport plan in Phnom Penh Capital City*, Executive Summary of the Final Report

¹⁵ IDEA estimates (2017) <http://www.scmp.com/week-asia/society/article/2097978/what-will-become-cambodias-endangered-tuk-tuk-drivers>

¹⁶ *ibid*

¹⁷ IDEA estimates (2010) <https://www.cambodiadaily.com/news/tuk-tuk-increase-in-capital-slashes-profits-for-drivers-104878/>

19. **Nature and extent of social security:** There is minimal coverage of social protection systems for the self-employed informal economy workers in Cambodia. Self-employed are not covered under the Labour Law and, as the NSSF presently extends its Social Protection benefits to workers covered under the Labour Law, its EII and SHI schemes do not allow coverage of own account workers (OAW) like tuk-tuk drivers. Thus, at present tuk-tuk drivers only have the option of registering for the Government led health care scheme Health Equity Fund (HEF). It is important to note that until recently, HEF was only open to those identified as “ID Poor”. It is only very recently that RGC has expanded voluntary access to HEF with the NSSF carrying out the registrations. Our survey, *inter alia*, attempted to understand the extent of HEF coverage among tuk-tuk drivers.

B. STUDY OBJECTIVES AND METHODOLOGY

B.1. Objectives

20. The broad objective of the research study is to develop evidence based knowledge and capacity development regarding social protection for workers in the informal economy. This report attempts to study social protection of tuk-tuk drivers who operate independently as Own Account Enterprise (OAE) with no hired labour. OAEs are one of the many forms of employment arrangements prevalent in the informal economy. A set of key research questions were developed after discussing with project stakeholders. These are

- i. Who are the key stakeholders in the relevant labour market where tuk-tuk drivers operate and what role do they play?
- ii. What are the socio-demographic indicators of tuk-tuk drivers?
- iii. What are the social protection benefits applicable to tuk-tuk drivers, to what extent do they enjoy social protection benefits?
- iv. What are the work arrangements related to tuk-tuk driving in Cambodia?
- v. Can tuk-tuk drivers afford social security contributions?
- vi. Are tuk-tuk drivers interested in receiving Social Protection benefits? Is there willingness to contribute towards Social Health Insurance (SHI) and Employee Injury Insurance (EII) of the NSSF?
- vii. What are the challenges that tuk-tuk drivers face and what are their coping mechanisms in the absence of social protection?

B.2. Methodology

21. The research methodology followed a mixed method approach consisting of desk literature review, secondary data collection, consultations with stakeholders, primary data collection which included Focussed Group Discussions (FGDs) and in-depth interviews. At an operational level, study has been sequenced in three stages. Key activities within each of these stages is given in Figure 1 and explained briefly thereafter.

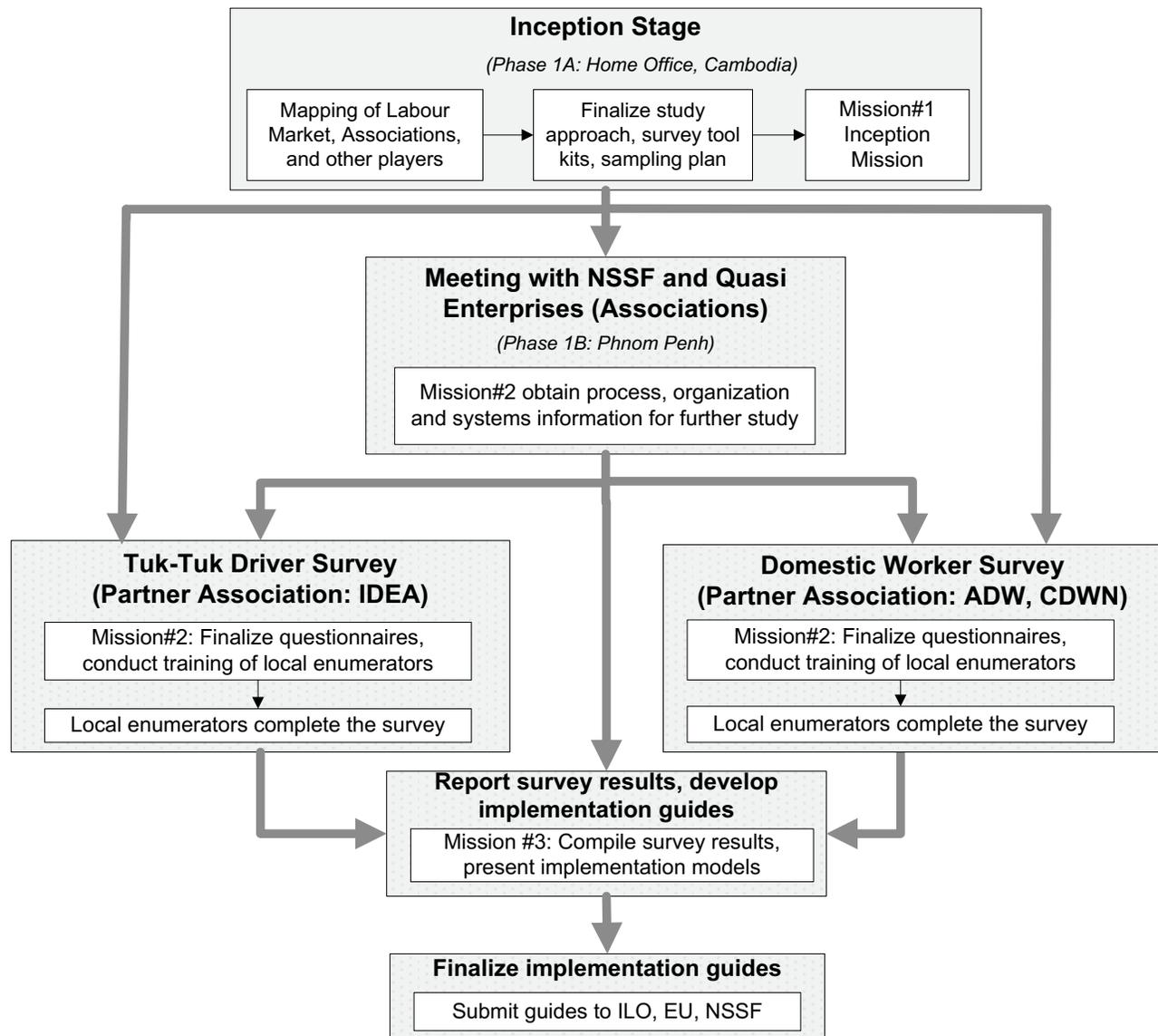


Figure 1: Engagement Approach

22. The inception stage included stakeholder interactions and finalizing the sampling plan, followed by preparation of survey instruments, pilot testing of questionnaires and planning and execution of field surveys. Meetings were held with concerned NSSF officials and workers' associations such as Independent Democracy of Informal Economy Association (IDEA).

23. For the workers' survey, IDEA (prominent tuk-tuk drivers association in Cambodia), was requested to mobilize the set of about 150 self-employed tuk-tuk drivers comprising about 80% of traditional tuk-tuk drivers, and 10% each of modern tuk-tuk and motodop drivers. IDEA was requested to draw sample respondents across the twelve zones of Phnom Penh. For key informant

surveys, IDEA officials and officers from NSSF divisions of Registration, Contribution, Inspections and Benefits Administration were requested to grant interviews to the study team.

24. The sample size for the survey and set of key informant interviews undertaken for this component of the study is given in Table 1. The stratification and survey instruments were finalized after discussing with EU-SPS, ILO and the associations during the inception mission.

Table 1: Survey sample size and set of key informant interviews

Sl. No.	Actors	Survey sample size and key informant interviews
1	Tuk-Tuk Drivers	<ul style="list-style-type: none"> Survey Coordinating Agency: IDEA 151 drivers (from downtown and peri-urban areas), members of IDEA Included 121 traditional tuk-tuks, 17 modern tuk-tuks and 13 motodops
2	Workers' Association interviews	<ul style="list-style-type: none"> First discussion session with IDEA regarding on-ground issues, survey sampling, respondent mobilization plan, interview scheduling and pilot testing of questionnaire on seven tuk-tuk drivers Second discussion session with IDEA to assess their membership management processes and capacity augmentation needed for them to work with NSSF to extend Social Protection to their members

25. Field surveys were conducted by a national team of surveyors. The survey was conducted using a structured questionnaire¹⁸. The questionnaires were prepared in English which were administered in Khmer by the national surveys in pilot interview sessions with tuk-tuk drivers. The feedback obtained during these pilot sessions were used to fine tune the questionnaires before rolling it out to all the respondents. The collected data was analysed using Statistical Package for Social Science (SPSS) version 22.0 and Microsoft Excel 2010.

B.3. Analytical Framework

26. The analytical framework for this study comprised following dimensions:

- i. Socio-economic profiling of survey respondents
- ii. Affordability analysis: employment arrangements, Income – Expenditure Analysis
- iii. Assessing Willingness To Pay
- iv. Social Protection Impact projections

27. Figure 2 depicts the steps undertaken for respondents profiling, affordability analysis, assessing willing to pay followed by a projection of possible impact on the beneficiaries if they were to adopt NSSF's social protection schemes.

¹⁸Questionnaires included as Annex-1

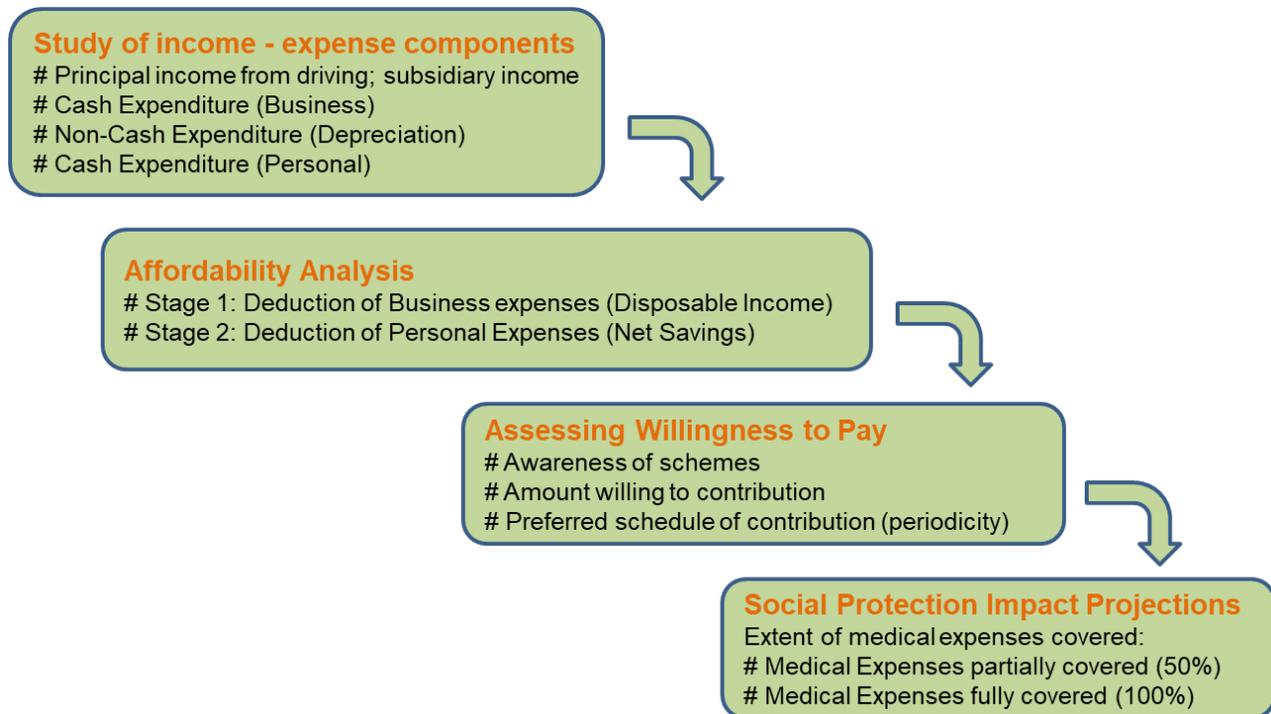


Figure 2: Analytical Framework

C. SURVEY FINDINGS

C.1. Labour Market: stakeholder map

28. Figure 3 illustrates the tuk-tuk drivers' labour market in Cambodia. Key stakeholders relevant to this study have been mapped. There could be other stakeholders (such as traffic management authorities) who have not been mapped.

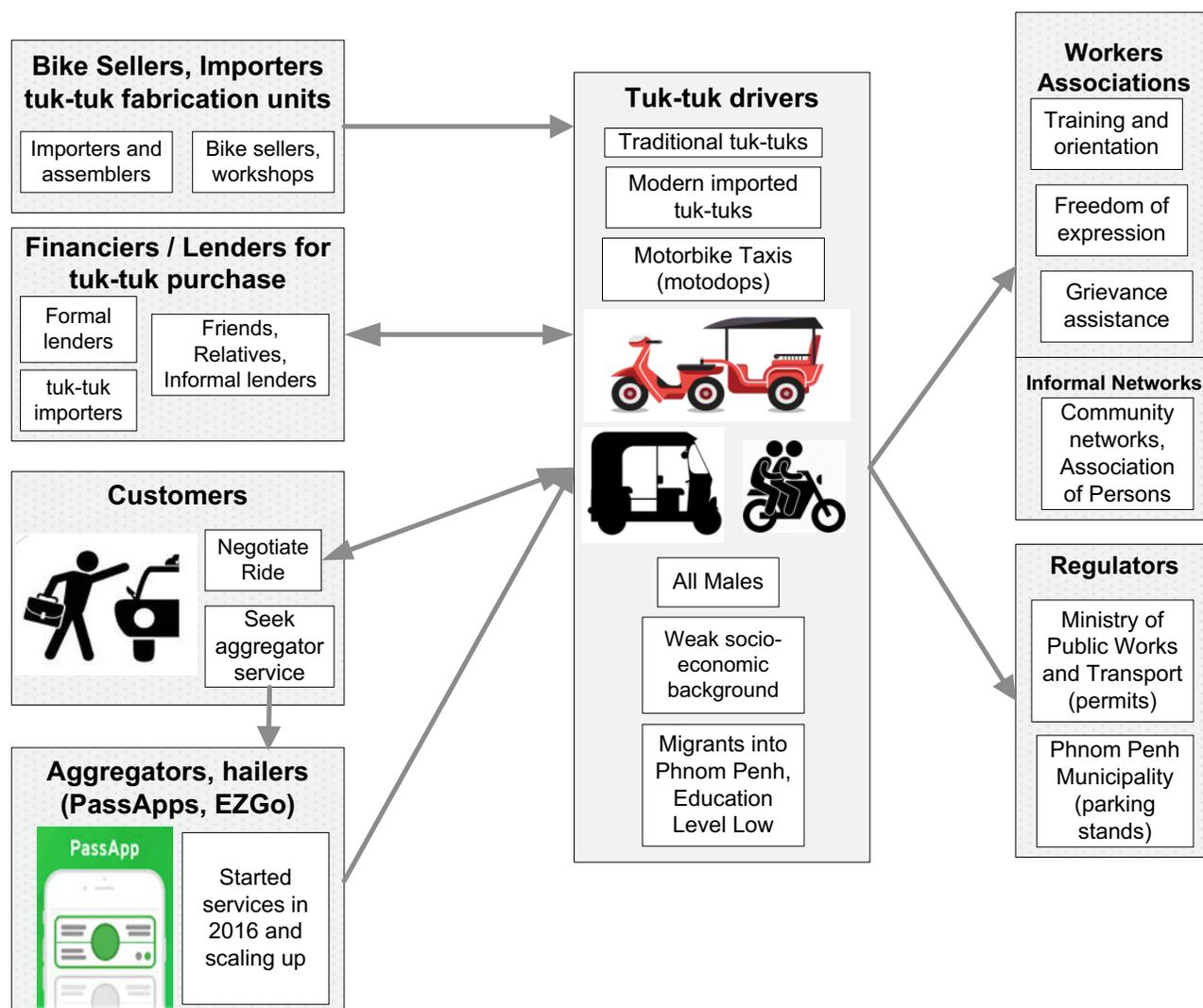


Figure 3: Tuk-tuk drivers' Labour Market: Mapping of Stakeholders (illustrative)

C.2. Profile of Respondents

29. This section outlines the socio-demographic profile of a sample of 151 tuk-tuk drivers in Phnom Penh. Of the total number of respondents, 80% drive traditional Tuk-Tuks, 11% drive modern tuk-tuks and 9% drive motodops. Tuk-Tuk driving in Cambodia is a male dominated occupation; all drivers in the sample were males.

30. **Age Profile:** Majority (36%) of the tuk-tuk drivers in the sample were in the age-group of 35 to 40 years, 18% were in the age-group of 30-35 years while 16% were in the age-group of 40 to 45 years. The average age of the respondents in the sample was around 38 years.

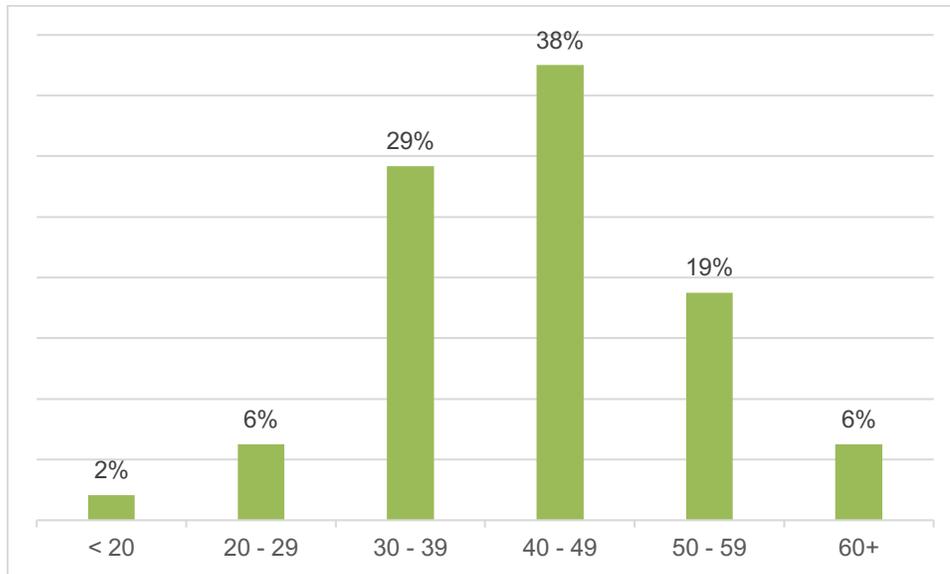


Figure 4: Age Profile of Tuk-Tuk drivers.

31. **Education:** Education reflects intellectual resource which affects a person’s cognitive thinking, decision making and labour market outcomes like employment prospects and wages. Commonly, formal education is captured by access to primary and secondary school. The education level of majority of the tuk-tuk drivers was low. About 29% dropped out before completing primary school, 17% studied upto primary school level, and 32% upto secondary school level. This means that a total of 78% of respondents dropped out before completing schooling.

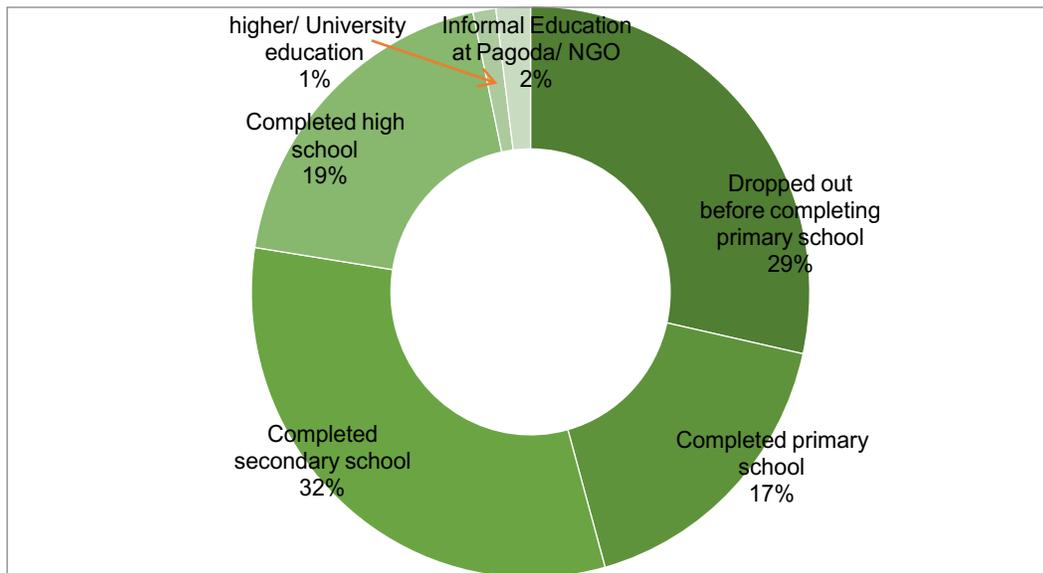


Figure 5: Education levels of tuk-tuk drivers

32. Low levels of education among tuk-tuk drivers limit their flexibility to switch occupations. In times of sustained pressure on income levels through rising competition, such flexibility would have been appropriate. Within the sub-segments considered, Motodop drivers had the lowest levels of education and were also placed “lower” than tuk-tuk drivers in terms of asset value and incomes.

33. **Skills and Training:** Vocational skills generally improve employment prospects. Only 20% of the respondents reported receiving vocational training. Training on traffic rules and regulations and training in languages like English and Thai are common. Phnom Penh being a popular tourist destination with a sizeable expat population, clearly multi-language skills is useful for tuk-tuk drivers while interacting with tourists.

34. **Place of Residence:** Phnom Penh being the hub of economic activities, attracts a considerable population from the countryside and other provinces. Many of the tuk-tuk drivers were from other provinces who had come to Phnom Penh looking for livelihood opportunities. They are referred to as migrants in the study. In the survey sample, 85% were migrants and out of those who responded, 25% went back to the provinces for a couple of months in a year for agricultural activities.

35. **Accommodation:** reflects economic condition and is an indicator of a person’s physical assets. 69% of the respondents reported to be living in rented accommodation, 4% lived with relatives and 27% lived in their own houses. Living in rented accommodations pushed up the cost of living and reduced savings especially for migrants who have come to Phnom Penh in search of livelihood and sending remittances back to their families in provinces.

36. **Identity Documents:** In our survey, 96% of tuk-tuk drivers possessed national ID card which is a pre-requisite for NSSF registration.

37. **Smart Phones:** Tuk-tuk drivers were asked if they had smart phones to understand how they adapted to modern technology gadgets and if they used it for business purposes. Almost three-fourth respondents had smart phones but only 15% reported using it for business purposes like getting connected to customers through smart applications like PassApps and EZgo.

38. **Access to bank accounts:** Bank accounts can serve as a gateway to various financial services. For majority of the poor, inadequate savings and long distances from banks are major obstacles to financial inclusion. The formal financial inclusion rate in Cambodia is 59%¹⁹. Within the formal financial sector, 17% of adults use banks, while 24% rely on microfinance institutions (MFIs)²⁰. In our survey, only 15% tuk-tuk drivers reported having bank accounts. People preferred sending remittances online through wing, E money, true money rather than bank account transfers. However, not having a bank account would not be an immediate impediment to accessing social protection benefits from NSSF, except in cases of disability where NSSF makes regular payments and requires the beneficiary to have a bank account.

¹⁹ McGrath, Cam, 2016. *New Tool for Financial Inclusion*. The Phnom Penh Post. Available at <http://www.phnompenhpost.com/business/new-tool-financial-inclusion> Accessed on 20th January 2018.

²⁰ *ibid*

39. **Vehicle Profile and source of funds:** For tuk-tuk drivers, their primary asset is tuk-tuk. Most of the tuk-tuks in Cambodia are second hand, particularly traditional tuk-tuks and motodops. In the sample, 65% used second hand tuk-tuks while 35% used first hand tuk-tuks. Imported modern tuks-tuks were all first-hand. This information is then taken into account to estimate useful life of the vehicle for assessing the depreciation cost of the vehicle that forms a part of the non-cash business expenses incurred by tuk-tuk drivers. Generally, the useful life of a tuk-tuk is estimated at 5-7 years.

40. In the survey sample, 40% of the tuk-tuk purchases were financed by borrowings (31% fully financed by loans and 9% financed by a mix of own funds and loan). In times of declining and unpredictable incomes, regular loan repayment liabilities can generate economic stress for the tuk-tuk drivers, limiting their ability (or can even generate reluctance) to contribute for the much needed social protection.

C.3. Work Arrangements

41. In our survey all respondents, except one, reported that they were owners of their tuk-tuks. The respondent who did not own the tuk-tuk used it on rent.

42. Work arrangements among tuk-tuk drivers may be studied based on the duration of engagement in driving in a year. Their work duration may be categorized into three: (a) drove tuk-tuks round the year, (b) drove tuk-tuks for a period between 6 to 12 months, (c) drove tuk-tuks for less than 6 months. For the purpose of this study, work duration data of the respondent was collected during the reference period of one year preceding the date of survey.

43. The activity status on which a person spent relatively longer time (major time criterion – at least 6 months) during the one year preceding the date of survey was considered the usual principal status (UPS) of the person's activity. (ii) A person whose usual principal status was determined on the basis of the major time criterion may have pursued some economic activity for a relatively shorter time (minor time – at least 30 days) during the reference period of one year preceding the date of survey. The status in which such economic activity is pursued is the subsidiary economic activity status of the person. The usual principal and subsidiary status (UPSS) consists of both categories of activities of the person in category (i) and (ii)²¹.

²¹ILO (2015) India Labour Market Update, p 2 http://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new_delhi/documents/publication/wcms_389159.pdf

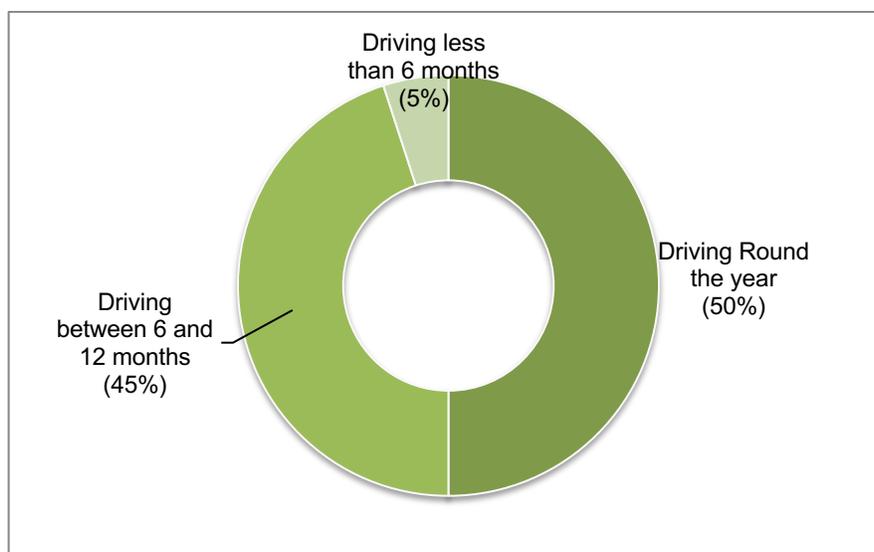


Figure 6: Self-employment engagement duration

44. It may be observed from Figure 6 that 50% of the respondents were driving tuk-tuks throughout the year, and 45% were driving for major part of year between 6 months to 12 months.

45. Distribution of respondents according to work duration between 6 and 12 months shows that 50% were driving for 10 months, 20% for 11 months, 15% for 9 months, and 10% for 8 months. Only 5% were driving for 6 months. For this cohort of drivers driving between 6 and 12 months, the average occupational engagement of driving tuk-tuks was about 10 months in a year. Around 25% of the respondents were from other provinces who went back to the provinces for some time in a year for agricultural activities such as either for sowing of seeds, or for harvest.

C.4. Affordability Analysis

46. Affordability analysis encompasses studying income patterns, understanding expenditure components and computing net savings. It is out of the net savings that respondents can make contributions towards social security.

47. A step wise procedure has been followed in order to study affordability of tuk-tuk drivers:
- i. Analysing income and expenditure for the years 2016 and 2017.
 - ii. Estimating average biennial income earned by summing income from driving and income from subsidiary sources for the years 2016 and 2017 and then averaging it over two years.
 - iii. Estimating business expenditure for 2016 and 2017 and then averaging it over two years.
 - iv. Computing disposable income by deducting business expenditure from income.
 - v. Computing net savings by deducting personal expenditure from disposable income.

48. **Income (from driving):** Discussions with IDEA representatives revealed that income from tuk-tuk driving has been declining in the recent years as many have taken to tuk-tuk driving and supply exceeds the urban transportation demand. Traditional tuk-tuks and motodops are facing competition from imported three wheelers (referred to as modern tuk-tuks in the survey) many of

which can be hailed through smart apps like PassApps and EZgo. As modern tuk-tuks are metered, many customers prefer them as they are charged consistently. In comparison, a traditional tuk-tuk ride fare is negotiated between the passenger and the driver, and fares are not always consistent.

49. Our survey also points to a decline in tuk-tuk driving income between 2016 and 2017. The annual income declined by 6% between 2016 and 2017. Although Monthly wages for those driving modern tuk-tuks rose from USD 267 to USD 333 from 2016 to 2017. Reported income of modern tuk-tuk drivers increased by 25% after shifting from driving traditional to modern tuk-tuks. Further analysis showed that decline in income has hit traditional tuk-tuk drivers and motodops hard. Income of traditional tuk-tuk drivers and motodops declined by 9% and 15% respectively (Table 2).

Table 2: Income (from driving) for Tuk-Tuk drivers

Vehicle Type	Monthly Average Income (from driving)		Average Annual Income (from driving)		Increase / Decrease in annual incomes (%)	Margin of Error at 95% confidence level	
	2016	2017	2016	2017		2016 → 2017	2016
Traditional Tuk-Tuks	280	259	3,412	3,110	(-) 9%		
Modern Tuk-Tuks	267	333	3,204	4,002	25%		
Motodops	276	235	3,318	2,820	(-)15%		
Overall	277	265	3,380	3,185	(-) 6%	8.8%	7.4%

Source: DEFT Survey Analysis.

50. Imported modern tuk-tuks were introduced in 2016. Our survey showed that about 88% of modern tuk-tuk drivers used smartphone apps like PassApps and EZGo to attract customers. Their customers paid by meter, and were charged consistently. Besides this, the cost of operations (using LPG as a fuel) is lower, benefitting the drivers themselves. Survey data indicates that although the procurement cost of modern tuk-tuks was relatively higher than traditional tuk-tuks, their annual income was also comparatively higher than that of the latter. Of the 17 modern tuk-tuk drivers interviewed, 16 of them faced difficult business conditions and moved from driving traditional tuk-tuks to modern tuk-tuks in 2016, while one joined the occupation by starting to drive modern tuk-tuks.

51. **Income (from all sources):** Income from subsidiary sources was added to income from driving in order to compute income from all sources. Even after adding subsidiary income, the total income from all sources also showed a decline by 2.7% between 2016 and 2017 (Table 3). This suggests that, tuk-tuk drivers are facing a difficult business environment.

52. The subsequent analysis has used biennial income for computing disposable income and net savings for tuk-tuk drivers.

Table 3: Income (from all sources) for Tuk-Tuk drivers

Annual Average Income from driving and subsidiary sources (USD)			Increase / Decrease in incomes (%)
2016	2017	Biennial	2016 → 2017
3,604	3,506	3,555	(-) 2.7%

Source: DEFT Survey Analysis.

53. **Expenditure analysis:** From a labour market perspective, tuk-tuk drivers are self-employed own account workers. Expenditure analysis would thus need to take into account both business and personal expenses. Accordingly, the overall expenditure framework was constructed comprising two heads: Business expenditure [Cash Expenditure and Non-Cash Expenditure (depreciation)] and Personal expenditure.

54. **Business expenditure:** The sub-heads under business expenditure are enlisted below and the annual business expenditure (biennial average of 2016 and 2017) under these components is shown in Table 4.

- i. Cash expenditure: primarily fuel and servicing expenses, and Repair and maintenance expenses.
- ii. Non-Cash expenditure: A generalized cost of acquisition of vehicle was estimated after rationalizing the repayment period, instalments and down payments, if any. The annual depreciation of the vehicle was estimated as an amount to be accrued towards replacement cost of the vehicle at the end of useful life of the asset for the tuk-tuk driver to remain in this business. Based on survey findings a useful asset life of 5 years has been assumed. The depreciation was calculated adopting the straight line method using rate of 20% on the cost of acquisition of the vehicle.

Table 4: Components of business expenditure

Cash Expenditure	Annual amount (USD)
Fuel and vehicle servicing (1)	968
Repair and Maintenance (2)	113
Total Cash Expenditure (3 = 1+2)	1,081
Non Cash Expenditure (4)	350
TOTAL (3+4)	1,431

Source: DEFT Survey Analysis

55. **Income from business:** Disposable income of tuk-tuk drivers (Table 5) has been computed by deducting business expenditure from annual average income (from all sources).

Table 5: Computation of Disposable Income

Income (USD)	Deduction of Business Expenditure Only (USD)		Income from Business (USD)
	Average Cash Expenditure (2)	Average Non Cash Expenditure (3)	Disposable Income (1–(2+3))
Annual Average Income (1)			
3,555	1,081	350	2,124

Source: DEFT Survey Analysis

56. **Comparison with minimum wages:** The income from tuk-tuk driving business has variations across months of the year with no clear pattern of high or low season emerging. In order to facilitate comparison with extent minimum wage benchmarks, the annual income of USD 2,124 was notionally levelled across 12 months. The notional monthly income worked out to be USD 177 which was almost at par with the minimum wage for the textile and footwear workers set by the Government^{22,23} at USD 170 per month for the year 2018.

57. It may be noted that through a structured intervention process, the wages for textile and footwear workers have increased over 180% over the past six years from USD 61 per month in 2012 to USD 170 in 2018. However, during the same period, the incomes of tuk-tuk drivers have been steadily falling from levels above the minimum wage floors of previous years (source: key informant interviews with IDEA representatives and press reports²⁴) to touch the minimum wage floor in the current year as seen from our survey results. Thus the tuk-tuk drivers, being in a self-employed occupation within the informal economy, are becoming an increasingly vulnerable lot.

58. **Personal expenditure:** Personal expenditure comprises expenses on food and non-food (including rent, electricity and other items), children's education, social events and festivals, medical and remittances (for cash expenses of families in the provinces). Loans repayments are also enlisted as a personal expenditure component, as it is an outflow from disposable income (Table 6) of tuk-tuk drivers. A prorated approach has been adopted to estimate an annual average figure for loan repayments. About 23% respondents had taken personal loans. A biennial weighted average of loan amount was computed and factored in the personal expenditure analysis.

Table 6: Components of personal expenditure

	Biennial expenditure (USD)	Proportion of each component (%)
Food expenses	612	32%
Non-food expenses	234	12%

²² <https://www.rfa.org/english/news/cambodia/textile-wages-10052017171647.html>

²³ <https://www.reuters.com/article/cambodia-economy-garmentworkers-wages/cambodia-hikes-minimum-wage-for-textiles-workers-by-11-pct-from-2018-idUSL4N1MG1Q6>

²⁴ <http://www.scmp.com/week-asia/society/article/2097978/what-will-become-cambodias-endangered-tuk-tuk-drivers>

	Biennial expenditure (USD)	Proportion of each component (%)
Education Expenses	168	9%
Medical expenses	122	6%
Expenses on social events	89	5%
Loan repayment	332**	17%
Remittances	356	19%
TOTAL	1,913	100%

** This is the personal loan component only. Loan repayment for purchasing tuk-tuks (as the case may be) has been considered as a part of business income-expenditure analysis (Table 4)

Source: DEFT Survey Analysis

59. **Net savings:** In the next step, personal expenditure was deducted from the income from business to compute the net savings. Average annual savings of tuk-tuk drivers was USD 211 (Table 7), which works out to monthly average savings of about USD 18.

Table 7: Computation of Net Savings

Income from Business (USD)	Deduction of Personal Cash Expenditure (USD)	
Disposable Income (1)	Average Personal Expenditure (2)	Annual Net Saving (1 – 2)
2,124	1,913	211

Source: DEFT Survey Analysis

C.5. Vulnerability and coping mechanisms

C.5.1. Vulnerabilities

60. **Shift in business models:** About 90% of those surveyed reported feeling threatened by competition from new entrants in the business and new 'aggregator' models as well as emerging alternate modes of urban transportation. Of these 90%, about 78% were apprehensive that their income would decline in the next one year, the patterns of which have already emerged from the survey data of traditional tuk-tuk and motodop drivers. More than 40% reported that they wanted to move away from the occupation. Low level of education and lack of other skills and training are genuine barriers to labour market movement. Our discussions with IDEA representatives revealed their anxiety that further competition could come from changes in the overall modes of urban, and specifically the taxi market with entry of hailing service providers.

61. **Very little savings:** The net annual saving of USD 211 (Table 7) when levelled across 12 months, works out to a notional monthly saving of USD 18. From the analysis of their declining incomes that presently stand almost at par with the minimum wages, it can thus be concluded that the tuk-tuk drivers thus stand at the margins and are vulnerable to any economic shocks or loss of business that could emanate from workplace injuries and medical exigencies.

62. **Long working hours:** On an average, tuk-tuk drivers spend 25 days in a month, driving for approximately 12-14 hours a day, much beyond 8 hours of work per day. 26% of them have a subsidiary source of income, where agricultural activities are the most common source. Even with this amount of effort they are barely able to make ends meet and are saving very little. This further reduces their ability to cope with any economic shocks and downturn of events.

63. **Low coverage of Social Protection:** Tuk-tuk driving being a self-employment, the drivers are not covered under Labour Law. Hence, they are excluded from coverage by NSSF schemes. Thus the only option available for tuk-tuk drivers is to register for HEF. Our survey found about 8% of the respondents had recently registered under HEF through the association. It is likely that this figure could be lower among non-members of any association. In the absence of any form of social protection and very little savings, the tuk-tuk drivers are a vulnerable segment of the Cambodian labour market.

C.5.2. Coping Mechanisms

64. **Migration:** Around 85% of the respondents in the sample were migrants who migrated into Phnom Penh in search of livelihood. Tuk-tuk driving (especially with bikes under 125 cc which do not require license) is a low entry barrier into the Phnom Penh labour market and hence an attractive proposition for rural to urban migrants in search of livelihood to cope with variations in agriculture incomes.

65. **Borrowing and its stress:** In the absence of limited savings, many tuk-tuk drivers informally borrow money from relatives, friends and others to meet buy tuk-tuks to replace their aging assets. The modern tuk-tuks are all financed through loans routed through formal channels. About 40% of the tuk-tuks bought were financed through loans, which were being serviced. With declining incomes, schedule of repayment of many of the informal loans were extended based on mutual understanding between the lender and borrower. Though they could be willing, this stress on net savings and vehicle loan servicing could impose a limitation on the affordability of some of the tuk-tuk drivers towards contributory social protection schemes.

66. **Shift of occupation:** Many of the tuk-tuk drivers reported that they are uncertain about continuing with tuk-tuk driving as their usual principal activity status. The market uncertainty was leading them to consider other sources of earning. About 42% reported that they wanted to shift from tuk-tuk driving and would like to consider other self-employment avenues like selling food, driving taxi or cultivating as a coping strategy. A few traditional tuk-tuk drivers are also considering

purchasing and driving modern tuk-tuks which they think will enable them to earn more in the wake of changing market demand²⁵.

C.6. Willingness to pay for NSSF Schemes

67. Willingness to enrol for social protection schemes can be construed as an indicator of the informal workers search for a coping mechanism. As a coping mechanism for tuk-tuk drivers standing at the edge of poverty, an extension of government-led social protection coverage would be greatly beneficial to them. Out of 93% respondents who showed interest to join NSSF schemes, 89% reported that they would prefer a monthly contribution schedule.

68. According to NSSF's guidelines, KHR 6,800 is set as the minimum monthly contribution to be paid in order to qualify for social security benefits. Survey findings (Table 8) show that 66% of the respondents were willing to pay the monthly minimum amount of KHR 6,800 or above.

Table 8: Assessing Willingness to Pay (WTP)

Willingness To Pay	WTP amount as percentage of monthly wages	Contextual Interpretation	Respondents (%)
Not willing to Pay		-	7%
Less than KHR 6,800		Will not be eligible for NSSF registration under any of the present schemes	27%
KHR 6,800 and above	Less than 0.8% of assumed monthly wages	Less than the NSSF stipulated monthly wage percentage of for either EII or SHI	5%
	Between 0.8% and 3.4% of assumed monthly wages	Will be eligible for NSSF registration under EII scheme only	52%
	3.4% of assumed monthly wages and above	Will be eligible for NSSF registration under present EII scheme and SHI scheme (2.6% of wages as SHI and 0.8% of wages as EII = 3.4% of wages)	9%
Total			100%

Source: Deft Survey Analysis

69. The monthly contribution for EII is between 0.8% and 3.4% of wages. About 52% of respondents were willing to pay between 0.8% and 2.1% of assumed monthly wages who, under present norms, would be eligible for EII cover only.

²⁵ Citation based on observations from field discussions.

70. Only a small proportion (9%) of the respondents actually fitted all the criteria set out by NSSF for registration under its schemes. Thus some adjustments would need to be made by NSSF to extend social insurance coverage to this segment of the labour market. One such possibility could be to allow any tuk-tuk drivers willing to pay more than KHR 6,800 to join the EII and SHI schemes through their association by flexibly choosing their 'assumed wage' level as prescribed by the NSSF vide Annex 1 of Prakas 449 LV/PrK on Determination of Contribution Rate. An extract of the contribution table (lowest five levels) from Prakas Annex 1 is given below in Table 9 for ready reference.

Table 9: Contribution for Occupational Risk (EII) and Health Care (SHI)

Level	Monthly Wage (Riel)	Assumed Wage (Riel)	Monthly Contribution for Occupational Risk per Worker (0.8%)	Monthly Contribution for Health Care per Worker (2.6%)	Total Contribution
1	Below 200,000	200,000	1,600	5,200	6,800
2	200,001 – 250,000	225,000	1,800	5,850	7,650
3	250,001 – 300,000	275,000	2,200	7,150	9,350
4	300,001 – 350,000	325,000	2,600	8,450	11,050
5	350,001 – 400,000	375,000	3,000	9,750	12,750

C.7. Social Protection Impact Projection

71. Out of pocket medical expenditure is likely to have an adverse impact on Tuk-Tuk drivers, especially those living on the margins. In the absence of any social health security coverage, they would have to use their own savings, or in worse scenario either sell assets or borrow (from friends and/or extended family) to cope with the situation. In such cases, the NSSF coverage (through EII and SHI schemes) can make a difference in this situation by extending protection to them and prevent them from slipping into poverty.

72. A modelling exercise was attempted on the survey data to (a) better understand the favourable impact (if any) which NSSF social security coverage would have on the workers, (b) the extent NSSF coverage would benefit tuk-tuk drivers if they face a medical emergency situation with unexpected high medical treatment expenses.

73. As a first step, the annual medical expenses were tabulated (Table 10) and we segregated the data for the cohort with an annual medical expenditure threshold of more than USD 100. While the modelling was done using available survey data for a particular cohort, the findings could apply to all workers who could be needed to incur such costs in future, should any exigency arise.

Table 10: Medical Expenditure Analysis

Annual Medical Expenses (USD)	Year 2016	Year 2017
Less than 100	61%	68%
100 – 200	22%	20%
200 – 500	11%	7%
500 – 1,000	5%	3%
Above 1,000	1%	2%

} 39%
} 32%

Source: Deft Survey Analysis

74. In the next step, the projection scenario was built for the respondents who incurred more than USD 100 as annual medical expenditure.

75. Our survey findings suggest that, majority of the respondents expressed willingness to contribute a monthly amount of USD 2 (KHR 8,000) based on a modal analysis for the amount that respondents are willing to contribute. According to present NSSF guidelines, the nearest amount of contribution that rounds close to our survey figure is KHR 7,650 (equivalent USD 1.9). Hence, an annual amount of USD 24 (based on monthly contribution of USD 2) was used to build the projection scenario.

76. The projection scenario was based where the beneficiary would get partial coverage from NSSF (we took 50%) of his medical expenses as it was unlikely that all medical services could be availed from hospitals covered by the NSSF or that all medical expenses incurred by the workers could be claimed from the NSSF. We observed the changes in the amount of net savings of tuk-tuk drivers as an output of the projection exercise.

77. Computationally this scenario was built by deducting half of the average total annual medical expenses of the workers from the overall expenditure framework and adding back USD 24 as contribution that would be required to be made by the workers to the NSSF (Table 11).

Table 11: Social Protection Impact Scenarios on coverage of medical expenses

Scenarios: extent of benefit obtained	Annual Net Savings in Year 2017 (USD)	Levelled Monthly Net Savings in 2017 (USD)
If not covered	60	5
If partial (50%) medical expenses were covered	207	17

Source: Deft Survey Analysis

78. Poor people working in the informal economy are vulnerable to unpredictable health treatment expenses as majority do not have any health protection mechanism to fall upon. The analysis clearly shows that respondents with high annual medical expenses would be able to save

more if they become beneficiaries of NSSF's social protection schemes. It may be noted that social health protection coverage would benefit all, including those with low medical treatment expenses today but may be required to spend large amounts on healthcare should the need arise in future.

D. CONCLUDING REMARKS

79. The number of tuk-tuks in Phnom Penh has grown about five fold in the last ten years and at present there are about 10,000 tuk-tuks plying in the city (para 15). As a result of this surge in competition, compounded by entry of other competitors like cab hailing service providers, the income from tuk-tuk driving is showing a decline. Almost all (96%) respondents reported that the business environment was challenging and they were facing a decline in their income. About 42% of the respondents wanted to shift from driving tuk-tuks and were considering other coping strategies. Some traditional tuk-tuk drivers reported they were considering purchasing modern tuk-tuks which they think will enable them to sustain incomes in the wake of changing market demand.

80. According to the survey findings, 66% of respondents reported that they were willing to pay the monthly minimum amount of KHR 6,800 for availing NSSF benefits. Only a small proportion (9%) of the respondents actually fitted all the criteria set out by NSSF for registration under its schemes. Thus some adjustments would need to be made by NSSF to extend social insurance coverage to this segment of the labour market. One such possibility could be to allow any tuk-tuk driver willing to pay more than KHR 6,800 to join the EII and SHI schemes through their association by flexibly choosing their 'assumed wage' level as prescribed by the NSSF.

81. It is observed from the survey data that respondents with annual medical expenditures higher than USD 100 were at the brink of dis-savings. The projection analysis clearly shows that respondents with high annual medical expenses would be able to save more if they become beneficiaries of NSSF's social protection schemes. While the modelling was done using available survey data for a particular cohort, the benefits of NSSF's social protection would apply to all workers who need to incur medical treatment costs in future.

82. The process of registration of workers with the NSSF and maintaining them as active beneficiaries in the longer term involves reasonable amount of paper work, making regular contribution through Banks and completing claim documentation (whenever needed) which requires some level of education. However, the general education levels of tuk-tuk drivers were found to be low; a total of 78% dropped out before completing schooling. With such levels of education, and in the absence of any employer, the tuk-tuk drivers would not have the requisite capacity to engage with a public institution such as the NSSF directly. Hence, a Labour Market Intermediary (LMI) such as a workers' association, would be required to extend NSSF's coverage to this section of the workforce and continue maintaining them under its aegis.