Assessing the Nudge Effect of Sehat Sahulat Programme

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DEDICATION

To the memories of my nephew, Umar.

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ABSTRACT

The importance of affordable and efficient healthcare is well understood. Pre-payment, which can be more economical in cushioning against catastrophic health expenditure and efficient than out-of-pocket payment, is not a well-established mode of healthcare finance in Khyber Pakhtunkhwa (KP) and all over Pakistan. This is due to lack of insurance culture which markets have failed to develop over the years. Sehat Sahulat Programme (SSP), a health insurance program by Government of KP, was launched to add and promote pre-payment as an alternative to existing modes of healthcare finance. The aim of this study is to examine household preferences for willingness to pre-pay for healthcare that SSP intended to develop. It targets respondents who do not have first-hand experience with voluntary health insurance. Survey in two districts of KP, Peshawar and Charsadda, elicited views on willingness to participate at a flat premium in SSP on voluntary basis. This study finds that 72% of the respondents were willing to participate through contributory payments. Age, household disease profile, and economic status explained their participation decision. However, a possible interaction of economic status with other social factors may dilute its explanatory power. It was also observed that reasons for not purchasing market insurance among insurance literates were predominantly informational rather than economic, which SSP addressed to a greater extent. Lastly, it was observed that making social cause of risk pooling known to respondents increased their willingness to participate by 15 percentage points.

This study concludes that the important conditions on demand side—willingness to pay, solidarity, and trust on government—for a contributory arm in SSP exists in the study districts, which provides Government of KP an opportunity window to pilot it.

DEFINITIONS

Availability Bias	Bias in decisions caused by recent/readily available events.
Balanced Reciprocity	Expecting equal returns from exchange with others.
Catastrophic Health Expenditure	Health expenditure that poses a threat to meet subsistence needs.
Community Based Health Insurance	A type of mutual health insurance.
Inferior good	A good demand of which decreases as income increases.
Missing market	A situation in which the potential for a pareto-efficient bargaining exists, but due to some obstructions no such bargaining happens.
Mutual Health Insurance	An arrangement in which unutilized premium is distributed back among policy holders or is reserved for future.
National Health Insurance	A government run insurance program that is usually financed with general tax revenues.
Nudge	Nudge is a concept in behavioral economics which proposes positive reinforcements and indirect suggestions as ways to influence decision making.
Out-of-pocket Expenditure	Direct expenses made by patients to healthcare providers at the time of service use.
Peer Effect	The influence on people by their peers.

Pre-payment	Paying in advance for a service that is uncertain to be delivered (e.g., insurance).
Public Good	A good which is non-rival and non-excludable.
Social Health Insurance	An insurance arrangement in which government or independent organization collects premium through mandates.
Solidarity	A sense of shared interests, objectives and sympathies that drives unity in communities, groups or classes.
Status Quo Bias	The tendency to stick to previous decision.

ABBREVIATIONS

BISP	Benazir Income Support Program
CBHI	Community Based Health Insurance
CHF	Citizen's Health Fund
CMS	Cooperative Medical System
KfW	Kreditanstalt für Wiederaufbau, German Development Bank
KP	Khyber Pakhtunkhwa
NFIS	National Financial Inclusion Strategy
NGO	Non-government Organization
NHI	National Health Insurance
NHIF	National Hospital Insurance Fund
OPE	Out of Pocket Expenditure
PKR	Pakistani Rupee
PMT	Proxy Means Test
SHI	Social Health Insurance
SHPI	Social Health Protection Initiative
SIC	Sehat Insaf Card
SLIC	State Life Insurance Corporation of Pakistan
SSK	Shasthyo Surokhsha Karmasuchi
SSP	Sehat Sahulat Programme

TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

In December 2015 Government of Khyber Pakhtunkhwa (KP) launched Social Health Protection Initiative (SHPI), commonly known as Sehat Sahulat Programme (SSP). Its purpose was to reduce private out-of-pocket expenditure (OPE) in KP, which accounted for 72.4% of total health expenditure in FY 2016 (Asian Development Bank [ADB], 2019).

SSP, which is an insurance scheme, is a pre-payment method of healthcare finance. Hence, it is a substitute for private out-of-pocket expenditure. In general, pre-payment (e.g., health insurance) and OPE like other substitutes follow the basic economic principle: increase in price of one increases demand for other. However, a high OPE and a negligible penetration of health insurance—which is less than 0.18% of Pakistan's GDP—indicates that market has failed in promoting pre-payment healthcare finance as an alternative to OPE. This was the basic motive behind SSP: to promote pre-payment culture (health insurance) and reduce reliance on OPE which may lead to catastrophic health expenditure.

SSP was piloted in four districts of KP: Chitral, Kohat, Malakand, Mardan. It aimed that premium for poorest 21% of population in each district would be paid by government to an insurance company. Along with this, the insurance company would encourage the next poorest 30% to enroll in form of group insurance on voluntary basis. Thus enrolling 51% of the population in target districts (Health Department, 2015). It was planned to be a five-year project; and if succeeded, it would be expanded to other districts.

The purpose of enrolling poorest population was twofold. First, to reduce out-of-pocket expenditure of poorest poor, thereby poverty; second, to market through their experience the

insurance product (Sehat Insaf Card) among relatively better-off people. That is, to nudge—influence their behavior on demand side—towards pre-payment method of healthcare finance.

Nudge, which literary means 'to push gently', is a buzzword assigned by Thaler and Sunstein to a philosophical framework, libertarian paternalism (Thaler, 2008; Thaler & Sunstein, 2003). This approach focuses upon influencing behavior on demand side through the consumer. It, therefore, does not allow regulation (e.g., making health insurance compulsory). Rather the choice architecture is altered in such a way that people automatically get inclined towards the desired outcome (for instance, making the choice of out-of-pocket expenditure look expensive in comparison to a low cost pre-paid 'health card') (Oliver, 2015).

In this case, nudging of ineligible households towards prepayment works through transmission of social information about the experiences of beneficiaries with Sehat card. Ineligible households learn from actions of beneficiaries how Sehat card works and what its benefits are. This social learning is likely to influence their behavior and make them demand for Sehat card on voluntary basis. Such an experimental intervention for duration of five years SSP was in the mentioned four districts.

1.2 Brief Description of Sehat Sahulat Program

Sehat Sahulat Program is a social health insurance-based program. Government through a competitive bidding process selects an insurance company, which is currently State Life Insurance Corporation of Pakistan (SLIC or State Life). Government pays it premium on behalf of the beneficiaries. State Life issues health insurance card to them. It has empaneled private and government healthcare providers where beneficiaries seek treatment under health card. It is a cash less payment, and beneficiaries do not pay out of pocket. Features of Sehat Sahulat are described in table 1.

Table 1: Key Features of Sehat Sahulat Programme (Phase 3)

Area and Population	All Districts of KP. Families with a PMT score less than or equal to 32.5 are eligible.
Source of Funding	KP government's general tax revenues through Annual Development Program.
Premium	PKR 1700—2100 (exact figure not known). For phase 2, it was PKR 1499.
Expenditure Covered	Secondary Care: PKR 240,000 per family per year. Priority Care: PKR 300,000 per family per year.
Members Covered	Husband, wife, and their dependent children with no limit on family size (previously maximum family limit was 8 members)
Type of Services Covered	Inpatient services (which requires hospitalization)
• Secondary Care	Around 425 secondary care conditions (including maternity care) are covered.
• Priority Care	It includes tertiary diseases such as cancer, cardiovascular diseases, diabetes, hepatitis, kidney failure etc.,
Other Services Covered	• Wage replacement of PKR 250 for three days. • Transportation allowance of PKR 2,000 if the patient is referred to a tertiary care hospital. • Burial allowance of PKR 10,000 in case of death during a hospital admission.
Service Provider	Both public and private providers. Public secondary and tertiary care hospitals are empaneled by default. Any private hospital can join the programme if it meets the criteria.

Its expenditure limit is quite generous as compared to other government-run programmes in the region. India's Rashtriya Swasthya Bima Yojana (RSBY) for the poor covers cost up to 30,000 Indian rupee (around 65,000 PKR). However, its beneficiaries base is broad—120 million people—and premium is as low as 200 Indian rupee per family (maximum five members).

Bangladesh's Shasthyo Surokhsha Karmasuchi (SSK) scheme, which is in pilot phase, covers up to € 500 (around 90,000 PKR) per family.

In the private market in Pakistan, the price and design of insurance plans differ across the providers. Based on my estimate a plan with same features of Sehat Sahulat Programme will cost at least 10,000 PKR per year for a young family of three to five members.

In first phase, SSP aimed to cover 21 percent of poorest households in the intervention districts. And to encourage voluntary enrollment among the remaining households, State Life hired an NGO. However, that intervention was never made.

In second phase the government in a *political move* expanded the programme to all 26 districts of KP to 50 percent of households (later on to 69 percent.) The option of voluntary insurance was retained as stated in PC-1 of phase II, "the insurance product will also be marketed for others whose premium is not paid by Government but who are willing to purchase the same voluntarily." (Health Department, 2016)

Sponsored by KfW, a German state-owned development bank, in first phase, SSP intended to follow the footsteps of German Social Health Insurance (SHI) program. Like different practices across the world (see appendix A), it intended to promote insurance culture.

1.3 Problem Statement

Pre-payment, which is more economical in cushioning against catastrophic health expenditure and socially desirable in terms of creating positive externalities than out-of-pocket payment, is not a well-established mode of healthcare finance in KP (and all over Pakistan). A financial risk pooling mechanism is needed more when out-of-pocket payment constitutes a high share of total health expenditures, which increases the risk of catastrophic expenditure. But as

much as risk pooling is needed in Pakistan, sheer information frictions are obstructing it from coming into existence.

KP's SSP is a step towards establishing a successful financial risk pooling mechanism that took decades to develop in other countries. SSP is a first intervention on such a large scale in insurance market. The way it demonstrated insurance service wouldn't have been possible for private sector. This study looks into perceptions of people about pre-payment built by SSP and focuses on the possibility of a contributory arm in SSP, as intended initially.

1.4 Research Question

i. Has Sehat Sahulat Program created willingness among ineligible people to participate in it on voluntary basis?

1.5 Research Objectives

i. To assess ineligible people's willingness to participate in SSP through contributory payments.
ii. To explore the possibility of a contributory arm in SSP.
iii. To observe which principle guides their willingness to contribute: Principle of 'Balanced Reciprocity'—expecting equal return from their contribution— or principle of 'Solidarity'—willing to contribute for social cause.

1.6 Organization of the Study

The study is organized as follows. Chapter 2 overviews the nature of insurance market, importance of information and role of government in insurance market. Chapter 3 reviews literature. Chapter 4 explains research methodology and data collection procedure. Chapter 5

analyzes and discusses the results. Chapter 6 concludes the study and provides recommendations. At the end references, appendices and questionnaire are given.

CHAPTER 2

INSURANCE, INFORMATION AND THE ROLE OF GOVERNMENT

2.1 Nature of Insurance Market

Insurance is a risk management tool that aims to protect against loss at a cost—called premium—which is comparatively low to the feared loss. Individuals facing a potential well-defined risk contribute a certain amount to a pool; and if an individual is unlucky and suffers loss, those contributions (premium) are used to cover it. The challenge in this arrangement is to accurately quantify the expected loss of the contributors so that a premium—that makes this arrangement financially sustainable—could be determined.

One institutional form for this to work is through the law of large numbers. According to which, pooling of a sufficiently large number of homogenous risks will roughly follow a Gaussian loss distribution (Lester, 2009). That is, average loss becomes nearly equal to expected loss, making it unlikely to deviate from expected loss (Kunreuther, Pauly, & McMorrow, 2013). As a result, expected loss becomes highly predictable, and the premium charged will be enough to make such an arrangement feasible and stable. Thus, an insurance market—where every participant agrees to pay a fixed-amount to get compensated should an event occur—comes into existence.

Insurance is unique in its nature. It is not a tangible good but an agreement among people to share good state with those in bad state (for instance, healthy people compensate ill people). It, therefore, creates desirable externalities, and is regarded as a social good (Goldstein & Pauly, 1976; Lester, 2009).

Despite its positive externalities, insurance is yet to develop in developing countries. For instance, insurance penetration in Pakistan is just 0.9% of the GDP. Eighty percent of it is

comprised of life-insurance. Remaining 20% are all other forms of insurance, making health insurance entirely *missing*. (Hanif, 2019)

Missing market is a situation in which the potential for a pareto-efficient bargaining exists, but due to some obstructions no such bargaining happens. In insurance markets, this obstruction is usually in the form of information failures.

2.2 Importance of Information in Insurance Market

Insurance is a market of imperfect information (Kingma, 1996). A widely discussed case of information imperfection that makes this market *missing* is adverse selection (hidden information). Adverse selection, also called biased selection, is the case of asymmetric information where a person who seeks insurance has more information, say about his health, than the provider of health insurance. Since premium is based on expected loss and is fixed for everyone, it is more attractive for a high-risk individual to signal good health and get insured. Unless the pool is large enough that his presence only marginally affects it, or enough number of low-risk individuals also join the pool to compensate for his presence the expected loss will go up causing premium to rise. Increase in premium discourages the low-risk individuals to be part of the pool, putting further strain on the pool, and the premium rises again. This *death spiral* goes on till the market cease to exist (Schieber, 1997). There are people willing to participate in a risk market, but it is now *missing.*

A common remedy for adverse selection is group insurance, which covers a group of people together (for instance, employees of an organization) instead of covering each person individually. This process brings in low-risk individuals to compensate for the high-risk individual(s). Following this logic, as the size of people in the pool increases, the risk will spread across large number of people, and therefore the cost of bearing risk declines. In Kenneth Arrows

words, which he used in context of government as a risk manager, “the total of the cost of risk bearing goes to zero as the population of taxpayers becomes large”. (Arrow & Lind, 1978)

But enrolling people is ever the problem. And it points to other aspects of information failures. Insurance is a complex concept. In term of free market, it is about paying in advance for a service that is uncertain to be delivered. In terms of risk-pooling, people due to cognitive limitations may not understand how risk pooling works and how it reduces the probability of the worst outcome for all the participants, which end up socially beneficial. (see appendix B for details)

One way forward to make people participate in risk-pooling is awareness. For instance, private insurers start educational campaigns. But such campaigns may financially be not rational for a for-profit company due to the public good nature of information: that is, non-rivalry and non-excludability. Once a company disseminates information among masses and a threshold level of understanding is achieved, then other companies will free ride in that environment. Benefits from awareness campaigns will not accrue in full to the campaigner.

Now suppose this information friction is reduced by any means and potential participants are fully informed about risk-pooling, such provision of plain information—for instance, in the form of pamphlets and videos—may still not translate into insurance uptake. There are other kinds of information that complements or may even overshadow plain information.

One such type is social information, which is information about the actions of people in surrounding. A person observes actions of other people and learns from their experiences with those actions (Cai, De Janvry, & Sadoulet, 2015). In environment with incomplete information, social information helps update belief about a product or service via social learning. For instance, learning the benefits of health insurance from experience of other people.

Environment in which information is already complete, social information influences decisions (about uptake of health insurance) via conformity with peer actions. A person may be positive about taking health insurance but is reluctant because the culture is not yet built. In this case his utility from insurance uptake will enhance if others take the same action as well (Cooper & Rege, 2011).

In other words, people who are unclear about benefits of health insurance, regardless of whether they have heard of 'it' or not, will learn it from people in surrounding, making them likely to uptake it. Those who already know how insurance works and its benefits but still reluctant to purchase are likely to conform with the purchase decision of others.

For for-profit companies, the challenge is to insure enough people so that such economies of scale are achieved that the premium charged is affordable for most of the segment of population, and at the same time it demonstrates benefits in a comprehensive way. But it is not possible when a market is not yet developed, and where information failures on demand side are also rampant.

On demand side, insurer appeal to governments to reduce information frictions. In case of these failures, the government steps in to play its paternalistic role.

2.3 Government Role in Nudging

Government plays its role to correct market failures that has socially optimal outcomes. It may play a *coercive* role such as regulation of insurance markets, mandating health insurance, linking agriculture insurance to agricultural loans etc., or a *catalytic* role such as promoting financial literacy, establishing new norms, piloting insurance programs.

For instance, the State Bank of Pakistan is promoting banking services among the unbanked with its National Financial Literacy Strategy (NFIS), and the government of Punjab is piloting a subsidized agricultural insurance program.

Since health insurance has desirable externalities and to a certain extent can be regarded as a public good (Goldstein & Pauly, 1976; Lester, 2009), it has become a norm for governments across the world to promote it. For example, Social Health Insurance schemes in Germany, Burkina Faso and Vietnam; heavy subsidies for employer-based health insurance and for vulnerable people in the United States of America; National Health Insurance scheme in Ghana and Canada; Community Based Health Insurance in African countries.

Sehat Sahulat Program in its pilot phase aimed to promote risk-pooling mechanism. It enrolled the poorest population first (whose PMT score was less than 16.7) and hoped to nudge—influence behavior on demand side of—the relatively better-off people to get enrolled voluntarily. It advertised insurance product in shape of 'health card' and expected to create demand through social transmission of information. The purpose of this work is to assess such an effect.

CHAPTER 3

REVIEW OF LITERATURE

3.1 Introduction

Promotion of health-risk sharing in developing countries is focus of contemporary insurance economics. But as much as a comprehensive health insurance program is needed in these countries, developing one faces same degree of challenges. First, their economies are mostly informal. Therefore, implementing a statutory (mandatory) health insurance scheme (or Social Health Insurance) as in Germany, France, Japan is a hard task. Second, these economies face revenue constraints. Likewise, health finance models like Beveridge model in the United Kingdom and National Health Insurance in Canada, which are fully financed with general tax revenues, are not feasible. For instance, just 22% of Pakistan economy is formal; and tax-to-GDP ratio is 13% as against required 23% of GDP. So, a middle way is needed in which people contribute voluntarily (in form of contributory arm to an already established national program as in Vietnam, or community-based fund as in Rwanda, or purely market based as in the US).

It follows that understanding of insurance or risk-pooling is important more than ever in these countries.

3.2 Demand for Health Insurance

Studies on demand for health insurance in informal sector (e.g., (Kirigia et al., 2005) in South Africa, (Xu et al., 2006) in Kenya, (Bhat & Jain, 2006) in India, (Jahangeer & Haq, 2015) in Pakistan) conclude income as one of the important determinants of demand for health insurance. These studies reflect the basics of consumer theory that insurance is a normal good with positive income elasticity of demand, meaning that low-income individuals will not insure (Schneider, 2004). But normality of health insurance also implies that when price of its substitute—out of

pocket expenditure—increases, its demand should increase as well. For the said reason, a relatively high out-of-pocket expenditure is one of the necessary conditions for emergence of health insurance market (Pauly, 2007). Insurance as a "normal good", therefore, leads to a demand side anomaly: out-of-pocket expenditure in developing countries is high (for example, in Pakistan it is more than 70% (Ayub et al., 2018)), but insurance demand is low. Also, low and middle-income people, who are likely to be pushed towards or below poverty line in case of catastrophic health expenditure, need risk-spreading the most. For this reason, Mossin (1968) called insurance an inferior good. That is, higher income enables individual to self-insure against a risk, which ideally reduces their reliance on market-based, or mutual insurance.

Theory of expected utility addresses this anomaly by terming insurance a contingent good (Kunreuther et al., 2013), not a tangible good as consumer theory portrays. Risk averse individuals maximize their expected utility by converting an uncertain future into a certain one. Thus, irrespective of income, demand for insurance is demand for certainty (Schoemaker, 1982).

Although it rules out 'affordability', a growing body of literature discards expected utility theory as a good predictor of choice behavior (Schoemaker, 1982). First, information is not complete as is assumed. For instance, biases in risk perception affects insurance decisions (Kunreuther et al., 2013; Viscusi, 1995). And an information intervention that updates risk perception, controlling for other factors, can increase insurance uptake (Miesler et al., 2017) . Second, low demand for insurance is not because of lack of risk aversion. Households are expected to become increasingly risk averse if they move closer to or further below the poverty line (Wagstaff, 2000); but it does not necessarily translate into insurance demand (Musgrove, 2007).

Low insurance uptake in presence of high out of pocket payments and risk aversion call for other explanations.

Studies show that people are biased towards current or previous decisions, termed as *status quo bias* (Kahneman, Knetsch, & Thaler, 1991; Salkeld, Ryan, & Short, 2000; Samuelson & Zeckhauser, 1988). Individuals are inclined to stay with previous choice if they are not sure whether the benefits from alternative choice would exceed the benefits from known experienced choice (Kahneman et al., 1991; Salkeld et al., 2000). They may be reluctant to depart from previous choice even though doing so may have substantial benefits. Inertia in choice decisions exists across all domains, ranging from labor market (Samuelson & Zeckhauser, 1988), product market (Dubé, Hitsch, & Rossi, 2010) to health insurance market (Ericson, 2012; Handel, 2013)

This suggests that people will stay with existing method of payment—out of pocket payments—under the *veil of experience or status quo bias* than to try its alternative—insurance. *The veil of experience* tends to be more dominant if enough information on alternative is not available (in settings in which the concept of insurance is new) (Schneider, 2004).

In that regard, Slovic et al. (2016) identifies three stages of uptake decision: 1) awareness about potential risk, 2) identifying insurance as a coping mechanism, 3) collecting insurance related information. In societies where insurance is identified and experienced as a risk coping tool are likely to insure. Santeramo (2018) shows that uptake decision reduces imperfect knowledge via learning-by-doing, and increases uptake in subsequent years. In other words, people who identify insurance as a risk pooling mechanism are likely to uptake. Also, experience in one domain (e.g. health insurance) leads to acceptance in other domains (e.g. disaster house insurance) (Wang et al., 2012).

In settings where insurance is not yet identified as a risk pooling mechanism, people's experience with pilot schemes and learning through information campaigns or social network increases its uptake.

In low insurance penetration settings in Kenya, Mathauer, Schmidt, and Wenyaa (2008) assessed perceptions of informal sector workers about Kenya National Hospital Insurance Fund (NHIF) in which they could enroll on voluntary basis. They observed that respondents wondered about high costs inpatient care coverage with comparatively low contribution rates. They found that from a financial perspective difference between expected utility with and without insurance was great.

Similarly, a study in Bangladesh informal sector workers in areas where microinsurance schemes were operating but lesser known concluded that educational intervention about health insurance increased willingness to purchase by 33% in the intervention group (J. A. Khan & Ahmed, 2013).

Another study on migrant informal workers in China concluded that actual participation in social insurance programs (not just willingness to pay) can be increased by 23—26% by simply raising awareness among migrant workers about its benefits and by guiding them how to participate. (Giles et al., 2018). Results of these studies are derived from explicit information intervention.

Besides direct information intervention, a strand of literature on social network shows that participation decision can be influenced by social information: information about the actions of other people. Adoption of insurance, like in the case of other products, depends on whether it is adopted by others, and whether it satisfies the social norms or not (Kunreuther et al., 2013).

Banerjee et al. (2013) found that acquiring information from friends is the most important channel to decide on microfinance participation. Cai et al. (2015) shows that acquiring knowledge about insurance through social network increases insurance uptake. These studies argue that some information incompleteness is reduced through social learning. But insurance markets remain

underdeveloped until a threshold level penetration is achieved that could guarantee transmission of information over a wide segment. Governments pilot insurance programs to surpass that threshold level in order to create a vibrant insurance culture.

3.3 Role of Government in Insurance Market

Government-run and government-supported insurance programs (in health, agriculture, flood, disaster) around the world shows that markets have failed to promote insurance as a risk pooling mechanism.

The Chinese government is promoting several insurance programs. In 2003 it launched New Rural Cooperative Medical System (CMS), a health insurance scheme for rural residents (mostly peasants); it expanded gradually, and by 2013 it had enrolled 99% of target population (Wu et al., 2018). Between 2004 and 2007, six provincial governments launched agricultural insurance on trial basis, which gradually materialized with support of relevant policies (Wang et al., 2012).

In Africa, Burkina Faso in 2019 launched Social Health Insurance Program that aims to develop in 10 years. During this period, it will cover formal sector through mandates, and convince informal sector to enroll voluntarily. Similarly, National Health Insurance Fund in Kenya was launched to promote pre-payment. It has a contributory arm for informal sector and is expanding gradually (World Bank Group, 2019).

Bangladesh is also piloting its first ever social health protection scheme, Shasthyo Surokhsha Karmasuchi (SSK), in three sub-districts of Tangail district. It is supported by Germany through KfW, the same German government-owned development bank that financed 88% of the premium of phase 1 of Sehat Sahulat Programme. SSK was launched in March 2016 in one sub-district, Kalihati. By September 2017 when it showed signs of maturity, it was extended to two

neighboring districts. Currently, the beneficiaries of SSK are people below the national poverty line and are enrolled for free. In long term, the SKK plans to become a national health insurance scheme with mandatory membership of all citizens. It intends to introduce principles of solidarity and risk pooling by adding people above the poverty line, who will pay premium to cross subsidize poor people and thereby create a sustainable insurance system (White-Kaba & Niechzial, 2018).

The gradual expansion of contemporary insurance programs takes its blue-print from century-old two insurance schemes: Germany Social Health Insurance (SHI), also known as Bismarck model of health finance, and Japanese National Citizen's Health Fund (CHF).

The 137 years old German SHI evolved from blue-color worker's sickness funds, which expanded in phases to whole population leading to universal health coverage (Busse et al., 2017). The Japanese CHF, one of the pillars of Japanese Social Health Insurance system, was formally established in 1938 based on a community health insurance prototype, the Jyorei system, which itself dates back to 1835. In Jyorei system, rural residents in a county would pool resources according to their ability to avoid catastrophic health expenditure. It gradually expanded to other counties; and with the help of government it scaled-up to national level (Ogawa et al., 2003)

SHI and CHF highlight the positive experience of participants regarding risk-pooling that kept the schemes sustained and the spillover of knowledge about such experience to other segments of population which helped in expanding the schemes.

Governments around the world play a catalytic role to showcase risk-pooling to people in order to nudge them towards it. Sehat Sahulat Program (Social Health Protection Initiative) of Khyber Pakhtunkhwa province in Pakistan was launched in the same spirit: to showcase 'insurance card', make awareness about risk-pooling through the experience of card holders and create demand for it.

3.4 Gap in Literature

This work intends to see people's willingness to participate in SSP on voluntary basis. In Pakistan, only one study is done in this regard. Khattak (2019) studied willingness of people who were enrolled in Prime Minister's National Health Program (now renamed as Sehat Sahulat Program). This study is different in many aspects. It targets non-poor ineligible people of KP's two districts: Peshawar and Charsadda. It observes perception of people (both insurance literate and illiterate) about Sehat Card. It also observes social capital (solidarity among people, trust on government and private insurer).

Regarding intervention on awareness about health insurance, this study is in line with studies already mentioned (Bocoum et al., 2017; Giles et al., 2018; J. A. Khan & Ahmed, 2013; Mathauer et al., 2008; Miesler et al., 2017). However, it is different in one aspect. The mentioned studies rely on findings from explicit information interventions that authors have made. The respondents were given information pamphlets or educated through educational videos and lectures. This study, in contrast, relies on the natural experiment of SSP marketing the insurance product, Sehat card. Because people have had sufficient understanding of how Sehat card works and what its benefits are, it serves as a natural information intervention.

CHAPTER 4

DATA AND METHODOLOGY

This chapter describes theoretical framework, research methodology and data collected for this study. It contains a brief description of study setting, research design, target population, sampling technique, and data collection procedure.

4.1 Theoretical Framework

4.1.1 Nudge Theory

'Nudge' is a fashionable word used by Thaler and Sunstein for a behavioral approach of influencing behavior on demand side. In their words, a nudge is '… any aspect of the choice architecture that alters people's behavior in a predictable way without forbidding any options or significantly changing their economic incentives." (Thaler, 2008). It follows a philosophical framework called Libertarian Paternalism (Thaler & Sunstein, 2003). According to them, 'humans' are not 'econs' (a term for rational economic agent as portrayed in neoclassical economics) because humans often make suboptimal choices. A paternalist—government, organization, individual—can help them make choices that are in their best interest. Such paternalism is libertarian in a sense that best choice is not forced upon them (e.g., mandatory insurance). But rather the choice architecture is designed in such a way that people automatically get inclined towards it (for instance, making the choice of out-of-pocket expenditure look expensive in comparison to a low cost pre-paid 'health card').

A nudge takes different forms depending on the context. It can be covert that appeals to a person's reflexive cognitive processes. It can be social (for instance, learning from experiences of others or getting under peer pressure) or informational (for instance, causing behavioral change by

provision of information). Both types appeal to reflective cognitive processes and works through information mechanism (Thaler, 2008).

Baldwin (2014) identifies three degrees of nudges on the basis of individual autonomy being affected. (second and third degree are not relevant here). First degree involves a simple provision of information. For example, information on benefits of vaccination or information on probability of getting ill in a region to help update risk perception. Information may also be in terms of a reference. For example, a person finding out his tax compliance rate is lower than his neighbor's is likely to increase tax compliance. Same holds for gains and losses. If a person gains are low in reference to his fellows' gains, he may not consider them gains at all.

Sehat Sahulat Program count as a nudge because it showcases benefits of health card (and health insurance). It is in fact a better demonstration of pre-paid finance than providing information kit or educational videos in areas where people have not practically observed it.

It also serves as a reference of expenditure for a person who relies on its alternative, out-of-pocket payment. Comparing his high out-of-pocket expenditure in reference to free treatment on Sehat Card is likely to make him demand for it.

4.2 Study Setting

This study is conducted for two districts of Khyber Pakhtunkhwa: Peshawar and Charsadda. District Peshawar is provincial capital of KPK. Its population is 4.27 million and number of households is 0.499 million. District Charsadda is adjacent and well connected to Peshawar. Its population is 1.6 million and number of households are 0.221 million (PBS, 2017). Reason for selecting these two districts is to control for supply side of healthcare which is likely to affect perception about health card. According to the utilization data of State Life (n=67264, till 2018), utilization-to-enrollment ratio of Peshawar and Charsadda were respectively 4.1 and 3.3 as

opposed to the average 3.2 (excluding Kohat, Mardan, Malakand, Chitral). Since Peshawar is the healthcare version of 'lender of the last resort', patients from other districts (in particular nearby Charsadda) seek healthcare in Peshawar. Modest utilization rate among enrolled people and availability of healthcare services imply that non-eligible people from Peshawar and Charsadda have had enough learning about Sehat Card.

4.3 Target Population

This study includes people whose score on PMT is above 32.5. These people are counted as non-poor and therefore ineligible for Sehat card. By an estimate a total of 260283 households from Peshawar and Charsadda are ineligible.

SSP has a helpline 03481116161 for complaints, information and eligibility related queries. Regarding eligibility queries, the helpline operators record personal data (such as CNIC, age, district, phone number etc.,) of callers. It also has an online form for eligibility checking which people fill, submit online and can share with one another through Facebook, WhatsApp and other social media apps. This form can be filled on the behalf of others (i.e., son, nephew, neighbor, mayor fills it for father, uncle, neighbor, village resident respectively). In one to three working days, the respondents are informed about their eligibility status through SMS, WhatsApp or phone call.

Ineligible people identified by the helpline data were used as a target population for this study. The unit of analysis is household head.

4.4 Sample Selection

4.4.1 Sampling Technique

Advantage of helpline data is that it has received calls and forms from almost all over the study districts. Despite this, the data do not allow for random probability design for all households of study districts from a strict statistical sampling perspective. For example, it gives under-coverage to households with female heads, old age respondent, and households in upper income quartile. Instead it allows for convenience sampling: identifying respondents based on their accessibility (Hesse-Biber & Leavy, 2011). Respondents who had submitted their information to helpline via phone or online form were contacted for the purpose of this study.

4.4.2 Inclusion and Exclusion Criteria

The unit of analysis is household head, who is not poor. Because the PMT score of Benazir Income Support Program Data is decade old, Rs 15000 per month (slightly below minimum wage for unskilled workers in KPK) was set as a minimum income for inclusion to the study. Second, respondent is an abled person (considering his earning status and because KPK government had announced inclusion of all disabled persons). Third, people who had recently lost a family member to a chronic illness were also excluded. This was done to not hurt their sentiments and to avoid availability bias. Fourth, respondents who already had first-hand experience with insurance were excluded.

4.4.3 Sample Size

Given a large exclusionary criteria and low response rate from respondents, a sample of 291 valid responses could be collected. Out of it, 123 (42%) respondents were from district Charsadda and 158 were from Peshawar.

4.5 Study Design

This study uses non-experimental or descriptive research design. A descriptive research design aims to identify factors and relationship among them, and create a detailed quantitative description of phenomena. It collects data and describe perceptions of a representative sample at a given time (Lavrakas, 2008).

4.6 Data Collection Methods

The study uses quantitative approach for data collection. Using a structured questionnaire, a person administered survey through phone call was done to collect the required information in the study districts.

4.6.1 Study Variables

Study variables include *willing to participate* in SSP on voluntary basis, and *solidarity level* which is measured by willing to contribute to a hypothetical health fund administered by government or private sector. Both take binary responses (yes, no).

Household head was asked that if government announced non-eligible households could enroll by paying an annual premium of PKR 2200 per family, would he participate?

PKR 2200 premium per annum for entire family is in fact low and does not represent the actual market rate. However, State Life had set this rate for the proposed community-based health insurance in phase-I and phase-II of SSP (although, this never happened). Moreover, at the time of data collection, KP government was negotiating a premium of no more than PKR 2200 for next phase with State Life.

Solidarity was measured by presenting respondent a hypothetical scenario. They were asked:

> **Suppose KP government creates a fund in which people from all over KP contribute PKR 2200 annually. So, if you fall ill, contribution of other people will be used for your treatment. In case you didn't get sick, your contribution will be used for treatment of other members. Will you contribute to such a fund?**

In framing proxy for solidarity, this study took guidance from work of (Goudge et al. (2012)). In addition to measure of solidarity among people, it also serves as a proxy for respondent's perception towards risk-pooling mechanism. Respondents who refuse to pay for Sehat card may be willing to pay for such fund once its social cause is known to them.

4.6.2 Demographic Variables: These variables include:

Continuous: age of household head, monthly income.

Categorical: education, household size, trust on government and private sector.

Binary: Urban/rural residence, presence of chronically ill person in family (at present or in past few months), literacy about insurance (or its variant, takaful)

4.6.3 Data Collection Procedure

I received one of the active SIMs from SSP Helpline for the purpose of data collection. The SIM worked under the main number (03481116161). Dialing from it would display the same number to a respondent giving signal that call was from the helpline. It helped in avoiding the distrust element on call.

Questions were asked on phone call from household heads. Some data on demographics was already available, so questions related to that were skipped wherever possible. The medium of communication was in local language, Pashtu.

It was made clear to the respondents that government had no intention to charge for Sehat Card or create a sickness fund. They were informed that the purpose of asking such questions was to record their perceptions. But to elicit responses as genuine as possible, this declaration was made at the end of questionnaire.

CHAPTER 5

DATA ANALYSIS AND DISCUSSION

In this chapter, primary data collected for this study is analyzed and interpreted.

5.1 Results

5.1.1 Willingness to Pay

All the respondents had nearly complete knowledge about Sehat Card. They knew what it was about, the way it was utilized, and the kind of treatment (in-patient care) done in it. Overall, they were positive about Sehat Card and did not express any unfavorable opinion about it.

They were asked were they willing to pay PKR 2200 annually to get enrolled in Sehat Sahulat Program. Out of 291 household heads, 209 (72 per cent) showed willingness to pay, 82 (28 percent) didn't.

As many factors (e.g., age, income, presence of ill person in family etc.,) affect the decision to join voluntarily. Segment wise statistics are presented to observe joining decision in more detail.

5.1.2 Willingness Statistics: Demographics Wise

Income, age, education, household size is categorized for cross comparison. For clarity, row-wise percentages for affirmative answer (yes) are shown in bracket in table 1.

Table 1 Willingess to pay: demographics wise

Characteristics	**Willing to pay**		
	No	Yes	Total
Economic Status			
PKR 15000—19000	34	41 (54.6)	75
PKR 20000—24000	32	60	92

		(65.22)	
PKR 25000—29000	10	59	69
		(85.51)	
PKR 30000+	6	44	50
		(88.00)	
Total	82	204	286
	28.67	(70.33)	
Age group			
25—34	47	60	107
		(56)	
35—40	21	77	98
		(78.6)	
40+	14	72	86
		(83.7)	
Total	82	209	291
Education			
Primary (including illiterate)	13	19	32
		(59)	
Middle	11	27	38
		(71)	
Matric	19	35	54
		(65)	
Intermediate	17	56	73
		(77)	
Undergraduate (14 yrs)	6	40	46
		(87)	
(Post) Graduate	16	32	48
		(66)	
Household Size			
2—3	13	27	40
		(67.5)	
4	23	37	60
		(61.7)	
5	30	59	89
		(66.3)	
6	9	53	62
		(85.48)	
6+	7	33	40

		(82.50)	
Chronically Ill (at present)			
No	60	139 (70)	199
Yes	21	68 (76)	89
Chronically Ill (in past six months)			
No	64	150 (70.09)	214
Yes	14	53 (79.10)	67
Chronically Ill (present/past)			
No	55	107 (66.05)	162
Yes	27	102 (79.07)	129
Residence			
Rural	49	108 (68.79)	157
Urban	29	99 (77.34)	128
Insurance Literacy			
Illiterate	23	64 (73.56)	87
Literate	53	138 (72.25)	191

It appears that increase in income and age increases willingness to enroll. It is reasonable for age. Aged people have more risk, and have experienced health expenditure more than younger people have. But same explanation may not hold for income. Expensive premium may not be the sole reason for low willingness in low income group given that the premium offered is well below the market rate.

Households with chronically ill persons at present and in past six months have shown higher willingness to participate. Their willingness may likely be overstated by *present bias* where a stronger weight is given to payoffs that are closer to the present time (Kahneman et al., 1982).

But the important observation here are the respondents who have no sick member in family either at present or in past. A decent number (66%) of such respondents have shown willingness to pay. This suggests that they consider *ex ante payment* a good alternative to *ex post payment.* This is good observation from nudge point of view.

A logistic regression was performed to observe group-wise explanatory power of demographics variables on willingness to enroll. (For model specification, see Appendix C).

				Observations =		280
				LR chi2(13) =		55.61
				Prob > chi2 =		0.0000
				Pseudo R2 =		0.1679
Willing to enroll	Odds Ratio	Std. Err.	z	P > z	[95% Conf.	Interval]
Income (ref: 15000—19000)						
20000—24000	1.376538	.5265885	0.84	0.404	.6503764	2.913477
25000—29000	4.107383	1.933952	3.00	0.003*	1.63222	10.33598
30000+	4.530181	2.6 84337	2.55	0.011*	1.418209	14.47074
Age (ref: 25-29)						
30—39	2.245408	.8254265	2.20	0.028**	1.092416	4.615327
40+	3.097706	1.401066	2.50	0.012**	1.276583	7.516775
Education (ref: primary)						
Middle	1.820778	1.118954	0.98	0.329	.5459511	6.0724
Matric	1.237353	.6868536	0.38	0.701	.4168621	3.67278
Intermediate	2.037077	1.13111	1.28	0.200	.68607	6.048484
Graduate (14 yrs)	3.471552	2.339699	1.85	0.065	.9264992	13.00776

Graduate (16+)	1.200402	.7849077	0.28	0.780	.3332351	4.324167
Sick (present/past)	1.96528	.6510426	2.04	0.041**	1.026703	3.76187
Urban residence	1.438953	.4431256	1.18	0.237	.7868989	2.631323
Household size	1.072194	.1475788	0.51	0.613	.8186765	1.404217
_cons	.2704358	.1765684	-2.00	0.045	.0752163	.972336

* significant at 1%

** significant at 5%

Regression results show that respondents belonging to income group 3 and 4 have, respectively, 4.1 times and 4.53 times greater odds of willing to enroll than income group 1. Similarly, the odds of willing to enroll are higher in age group 2 and 3 as compared to age group 1. Family with presence of chronically sick at present or in past months have a 96 percent greater odds than those families having no sick member at present or in past. Household size, rural/urban residence, education and insurance literacy (excluded because of no effect on fit of model) have no significant effect on willing to enroll decision.

5.2 Discussion

5.2.1 Learning and Nudging: Willingness to Pay Among Insurance Literate

Majority of the respondents (69%) had basic insurance literacy. They knew about pre-payment (premium) for protection against loss should an event occur. A modest number of respondents were not familiar with the word ‘insurance’. Instead, they knew insurance under the name ‘Bima’. Most respondents cited examples of fire insurance and car insurance to demonstrate their literacy. Literacy was slightly higher in urban residence than in rural residence.

Literate respondents were asked whether they had bought health insurance before. Only fifteen people said yes. Some of them had bought it when they were traveling abroad, which is generally compulsory; some were insured by their employer (usually government employees). Thus, voluntary insurance take-up was nearly zero among the literate respondents.

Those who haven't purchased were asked reasons for not doing so. Their responses were grouped in five categories.

Table 2 Reasons for not purchasing insurance

Response category	Explanation	Frequency
Expensive	People who said premium was high.	19
Search Friction/Information Friction	This include responses such as, 'No proper facility is available', I don't know properly about policy options, providers, signing up', 'I don't know how it will work in case I fell ill' etc., It includes transaction cost associated with search and information frictions.	48
Lack of trust on private providers	Responses such as 'private sector cares for profit only', 'fear that it will not pay claim' etc.,	35
Non-familiarity with expected benefits	Responses such as 'Lack of first-hand experience with insurance benefits', 'haven't observed its benefits (in surrounding)'.	55
Belief	Belief that insurance is forbidden in religion.	21
Other	This includes people who said they didn't need it (either they were not sick or could self-insure); hassle cost (people who said they wanted to purchase but were lazy to do so etc.,)	27

It was an open question; some respondents recorded more than one reasons. Figure 1 plots responses.

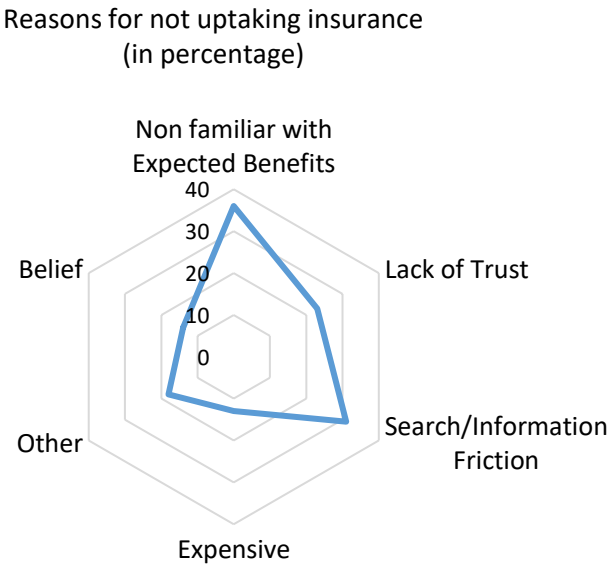

Figure 1

As this study attempts to find perceptions towards risk-pooling and belief-update about insurance, category 2 (information friction), 4 (unaware about expected benefits), and 5 (belief) are important.

Literate respondents were informed that Sehat Card was an insurance scheme in which the government pay premium on behalf of card holders. In fact, 29.7% of them were already familiar that Sehat Sahulat Program (SSP) was an insurance program.

Those who gave search/information friction as a reason for not purchasing, 90% of them were willing to get enrolled in SSP on voluntary basis. This suggests that: 1) they may consider SSP an easily accessible platform, 2) SSP made them learned how a health card works in treatment,

3) and that despite searching for best policy and best providers, default package (in terms of services and healthcare providers) of SSP is appealing to them.

SSP has also caused learning about how a health card would work in case they needed treatment under it. In addition to that, it will serve as a benchmark for any other health insurance card. Such learning is caused in category 4. Respondents who said lack of awareness of expected benefits was cause of low insurance take-up, 88% of them were willing to enroll on voluntary basis. They observed benefits of Sehat Card in a comprehensive way through experience of card holders, which is likely to be the reason for this group.

A similar observation was found in the assessment of informal sector worker's perception about Kenya National Hospital Insurance Fund (NHIF). NHIF enrolls people with income above 1000 Kenyan shilling through mandates and offers it to informal sector workers on voluntary basis. It was observed that informal sector workers learned about coverage of high healthcare cost with low pre-payment through the experience of enrolled people. From a financial perspective difference between their expected utility with and without insurance was great. (Mathauer et al., 2008)

Before Sehat Sahulat Program, health microfinance (HMI) have been tried across Pakistan, but they failed to build an insurance culture. In 2005, First Microinsurance Agency (FMiA) was launched by Agha Khan Agency for Microfinance with the help of a 5.4 million US dollars grant from the Bill & Melinda Gates Foundation. FMiA was a managing general agent and responsible for administering all microinsurance activities including designing HMI products. For HMI products, the premium was kept low to encourage uptake and increase the beneficiary base so that a large pool would make it financially sustainable. By 2009 it had enrolled around 21,000 people in health insurance. However, due to low marketing expenses, low population density and a large

lag time for benefits to transfer to policy holders failed to catch attention of potential beneficiaries. Besides that, large underwriting losses made the FMiA financially unsustainable and was closed in 2011. (F. Khan, 2013; McGuinness & Mandel, 2010)

Studies suggest that willingness to participate in microinsurance operating in a low insurance culture can be increased by disseminating information about expected benefits. For instance, Giles et al. (2018) concluded that actual participation (not just willingness to pay) in social insurance programs in China can be increased by 23—26% by simply raising awareness among migrant workers about its benefits and by guiding them how to participate. Similarly, J. A. Khan and Ahmed (2013) in a study conducted on microinsurance schemes in Bangladesh concluded that educational intervention about health insurance increased willingness to purchase by 33% in the intervention group. But such campaigns are financially not viable for enterprises in areas where appreciation and understanding of pre-payment is weak.

National Rural Support Programme (NRSP) in Pakistan is another organization that is promoting pre-payment. It has been running a health insurance programme in partnership with Adam Jee Insurance since 2005. However, its HMI product is limited to its loan clients. Also, its financial coverage is too modest to generate its demand in large segment of the society.

Benazir Income Support Programme also had a health insurance component under the name of Waseela-e-Sehat. Its operational procedure was almost similar to that of Sehat Sahulat Program. But it is not clear whether it was meant to promote pre-payment healthcare finance or not. Also, there is no study available on whether it created substantial awareness about pre-payment among non-eligible population.

A number of enterprises have entered the Pakistani insurance market. Some of them are trying novel ways of convincing people to participate. MILVIK Mobile Pakistan (private) Ltd is a

subsidiary of a Swedish insurance provider, MILVIK AB, and is working in Pakistan since 2014 in partnership with Jazz Telecom and Alfalah Insurance. After experiencing with insurance against personal accident, MILVIK has started its HMI product, BIMA Sehat. Individual can pay premium on daily and monthly basis which is deducted automatically from their prepaid mobile balance.

MILKVIK claims to have enrolled a total of over two million individuals across Pakistan. Among which, a significant number of people did not know about 'insurance/bima'. When people showed hesitance that their upfront payment would be lost in case the adverse event doesn't happen, they were given the analogy of insurance premium to the fee paid regularly to a security guard regardless of whether a robbery attempt has been foiled or not. Although innovative, MILVIK is in its nascent phase. Its coverage is modest and is limited to single individual and not family members. Also, children cannot be enrolled in it.

Mobilink Microfinance Bank is offering health insurance, underwritten by TPL LIFE, up to 200,000 PKR at 1,000 PKR per year per person. It covers inpatient services, online OPD and certain other services. One differentiating feature is that it allows for an 80% copayment by beneficiary seeking care at non-panel hospital. However, its product is limited only to its account holders.

The conventional insurance companies decide premium based on the client's demographic profile. They differ in their pricing, expenditure covered, services covered, service providers and the way of processing premium claims. It becomes very hard for a layman to compare and choose the best across the plans offered by these companies. For some companies such information is not even available on their websites. They are relying on conventional means such as brokerage for marketing their products. There are independent websites such as *mawazna.com*,

easyinsurance.com.pk that offers an easy platform for comparing plans of different companies. But even those websites are prone to cause information overload.

Sehat Sahulat Program, in contrast, has a large consumer base, generous coverage (up to 540,000 PKR which is likely to be revised to 720,000 PKR in next phase), and an extensive network of healthcare providers. It has advertised insurance card (Sehat Card) in a way that no private enterprise, non-government organization or previous government programs could ever have.

Willingness to participate in SSP on voluntary basis by study respondents can be attributed to two nudging factors. First factor is the plain demonstration of expected benefits of Sehat Card, which is discussed above.

Second factor involves exploitation of behavioral bias. Sehat Card serves as a reference of expenditure for a person who relies on its alternative, out-of-pocket payment. In case he makes high out-of-pocket expenditure on a treatment, he will consider it as a loss in reference to free treatment on Sehat Card. This loss aversion is likely to be one of the reasons for willingness to pre-pay.

Another feature that may have played or play role in future design of the program is the search friction reduced by the uniform-default plan. For instance, instead of people search for best plan for inpatient service, the government predetermines and negotiates the services with insurance provider on behalf of all the beneficiaries.

Category 5 (belief) gives an interesting observation. The belief that insurance is not permissible in religion was more prevalent in district Charsadda and rural residence than in Peshawar and urban residence. Most of the respondents cited clerics for the sake of argument. Overall, of 153 valid responses, 21 (13.7 %) provided belief as a reason not to get insured.

Before asking them about their willingness to participate in SSP, they were explicitly informed that SSP was also an insurance scheme. Of 21 respondents, five refused to participate because of its insurance nature. The remaining 16 didn't object. It means that they forgo their prior belief about insurance in their choice to get enrolled in SSP.

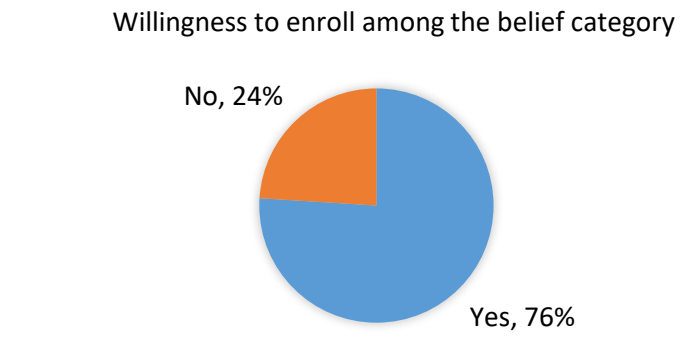

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Figure 2

Since the number of people in this category is low, it can't be confidently generalized for all population. However, it can be suggested for the given sample that SSP has changed their belief about insurance/bima.

This study didn't further find out the reason for this change in belief. However, people may rethink their prior belief when it is in conflict with opting a better choice environment and if they are provided with better set of factual information. For instance, Bocoum et al. (2017) conducted a study in Burkina Faso where insurance literacy was low and strong cultural beliefs prevailed. For example, one belief was that 'if a person buys insurance, he is calling upon the gods to fall sick'. They concluded that subjecting respondents to a hypothetical experience of facing health shocks with and without insurance increased their understanding of pre-pay healthcare finance and updated their otherwise strong cultural beliefs about insurance, which translated into its uptake.

Another important universal determinant is trust on the insurance providers. A large number of literature exists in this regard. Lack of trust was one of the reasons for the study

respondents to refuse to participate in a pre-pay healthcare finance system (table 2). In words of a CEO of a leading insurance provider, “they believe that insurance people are thieves and will flee with their money” (Hanif, 2019). However, the respondents showed high trust in the government and were willing to contribute (figure 4).

Willingness to pay among insurance illiterate is equivalent to that of literate group. What matters is the understanding of risk-pooling, its pros and cons even if people don’t have a proper word (insurance, bima, takaful) for it. This study suggests that such learning among the illiterate-ineligible people is created via the experience of enrolled people about Sehat Card.

For insurance market it is an important development. It will be much easier for non-profit organizations and for-profit insurance companies to promote risk-pooling among these people by using Sehat Card as a reference than in areas where people are not familiar with Sehat Card. Alternate persuasive methods such as pamphlets or educational videos may not work unless practical demonstration is observed in real environment. Same explanation holds for the literate group as well.

In other words, the incompleteness of information that insurance companies couldn’t address for so long (as evident by low penetration rate, particularly in health) is addressed by SSP. For private organizations to demonstrate pre-payment health finance on equal level to Sehat Card would’ve required large economies of scale and intense collective effort. Government played a paternalistic role by reducing information friction to a greater extent.

5.2.2 Reasons for Not Willing to Pay

Twenty eight percent respondents refused to get enrolled voluntarily. It was important to know reasons behind their refusal. Their responses are grouped in following categories.

Table 3 Reasons for not willing to pay

Category	Explanation	Frequency
Expensive	Responses such as, "I can't afford it".	34
No need	Responses such as, "We don't need it (either because of no sick member or could self-insure)".	18
Others got it for free, so should I.	This includes responses such as, "Others whose economic status is equal or better than us have got Sehat Card, but we haven't."	17
Belief	Refuse to pay because of insurance nature of Sehat Card.	5
		74 Respondents

"unable to afford" is concentrated in lower income group. Twenty five out of 34 belong to income group 1. Responses such as "others got it for free" is concentrated in group 1 and group 2. They argued that they were relatively equal or poorer than those who have received Sehat Card. This points to the discrepancy in Benazir Income Support Program (BISP) data on which cards were distributed. In fact, some better-off people have got it, but poorer people have not. Expecting such outcome, this study excluded non-eligible people whose monthly income was below Rs 15000.

In an informal meeting with project director of Sehat Sahulat Program, I asked about government motive behind its decision to expand SSP to all population. He quoted a government representative, "Some poor people, who are designated as rich in BISP data, complain to us about equity in SSP. Seeing relatively better-off people getting cards upset them. This wouldn't have been the case if enrolled people were poorer than them".

In that sense, such response seems rational. It further suggests that their refusal is not purely driven by income. Proportion of respondents willing to pay may increase if controlled for this factor.

5.2.3 Social Capital: Solidarity Among Respondents

Insurance is divided into two categories based on its operation: 1) Risk transferring, 2) Risk sharing. In risk transferring, policyholders transfer risk to insurance provider for a certain price. If no loss occurs, the price paid is profit of the provider. In risk sharing, there is no abnormal profit. If no loss occurs, the accumulated premiums are paid back to policy holders or are reserved for future losses. The provider only charges for managing the pool.

Contribution to a risk-sharing pool is further based on two principles: principle of 'Balanced Reciprocity' and principle of 'Solidarity'. In balanced reciprocity, contributor expects equal returns from their contribution. That is, a healthy person will not contribute if he expects ill people would gain but he would not. On the other hand, in solidarity people contribute for social cause. They contribute out of concern for others. The German sickness funds, Japanese Citizen's Health Fund etc., are driven by this motive. A society with high solidarity is likely to have a successful social insurance scheme.

As this study is looking forward to the possibility of such schemes, solidarity among people is an essential element to be measured. In this regard, respondents were asked:

> **Suppose KP government creates a fund in which people from all over KPK contribute Rs 2200 annually. So, if you fall ill, contribution of other people will be used for your treatment. In case you didn't get sick, your contribution will be used for treatment of other people. Will you contribute to such a fund?**

An overwhelming majority, 87 percent, were willing to contribute to such a fund, which is 15 percentage points higher than willing-to-enroll in SSP (72%).

A cross comparison with respect to income is shown in figure 3.

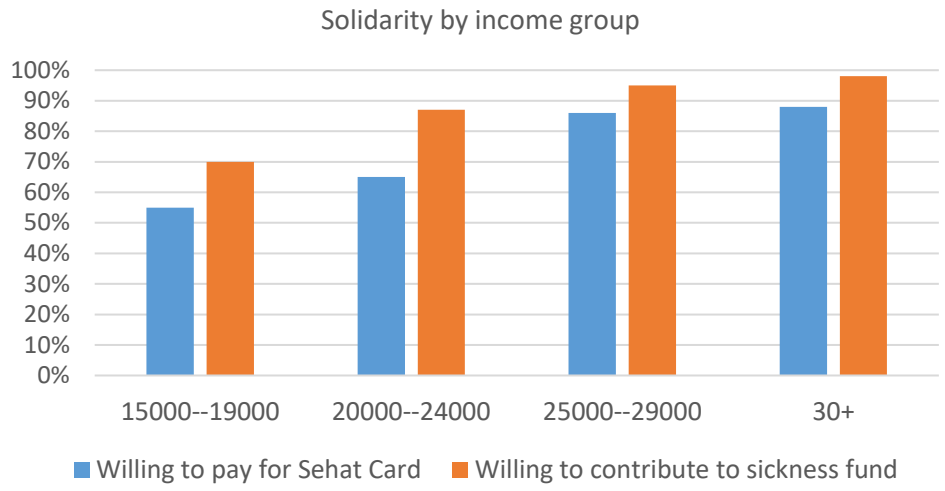

Figure 3

Some respondents were willing to contribute up to PKR 1000, but they were assigned to 'no solidarity', pulling down solidarity level in low income group.

To get insights, decision to voluntarily enroll is contrasted with solidarity in the following matrix. Figures in brackets are row percentages.

Table 4 Willing to enroll and solidarity matrix

	Solidarity		
Willing to Enroll in SSP	No	Yes	Total
No	33 (44)	42 (56)	75
Yes	3 (1.51)	196 (98.49)	199
Total	36 (13.13)	238 (86.86)	274

Fifty-six percent of the people who refused to enroll voluntarily for Rs 2200 in SSP were willing to contribute the same amount in sickness fund. This demonstrates that knowing the true nature and purpose of risk-sharing can increase participation.

Second important insight is that 98.5% of respondents who were willing to enroll in SSP on voluntary basis showed solidarity as well. It means that their contribution in SSP would likely be guided by principle of solidarity rather than principle of balanced reciprocity. In other words, in the name of social cause, they are likely to keep enrolling in SSP each year even if they face no bad event. This will ensure sustainability of such an arrangement.

Lastly, the 15-percentage points difference between voluntary enrollment in SSP and contribution to a sickness fund highlights the potential for further nudging. By nature, both SSP pool and sickness fund are same things. But the way in which they were presented were different and caused discrepancy in contribution decisions.

5.2.4 Social Capital: Trust on Government and Private Sector

Besides solidarity among people, trust is an important social capital for a prosperous society.

It is likely that a person shows high solidarity in contribution to sickness fund, but lack of trust on entity that manages that fund may make him hesitant to contribute. In this regard, respondents were asked how much they would trust private entity or government entity in managing appropriately the sickness fund. Figure 4 plots their responses.

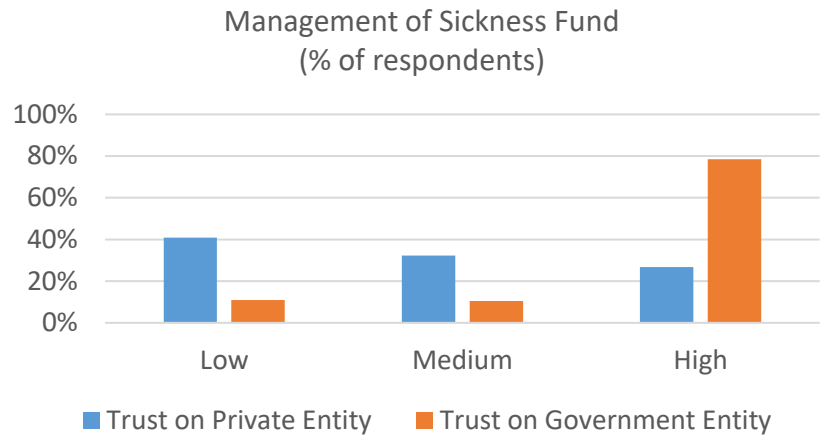

Figure 4

` Respondents showed low trust on private entity to start and organize sickness fund as compared to government. Majority of the respondents showed willingness to contribute to sickness fund organized by private organization if government authorizes or supervises it.

CHAPTER 6

CONCLUSION AND POLICY RECOMMENDATIONS

6.1 Conclusion

This study took advantage of the large natural experiment of Sehat Sahulat Program which showcased pre-payment healthcare finance (health insurance) in form of Sehat Card. This study focused on the effect of Sehat Sahulat Program on demand for Sehat Card among ineligible non-poor people of district Peshawar and Charsadda. It focused on people who didn't have first-hand experience with insurance (or its variant, takaful) and attempted to find out its reasons. It also observed social capital in the study districts to get better understanding.

It was found that majority of people (72%) were willing to purchase Sehat card voluntarily. Besides age and disease profile, income also appeared to explain this decision but a possible interaction of income with other social factors seemed to dilute its explanatory power.

It was observed that reasons for not purchasing insurance among insurance literate people were informational rather than economic. They haven't purchased insurance before because they were facing friction in search for insurance provider, optimal policy, and little know-how about the way benefits would be materialized; and because they didn't have social learning about real life demonstration of insurance benefits owing to lack of insurance culture.

It was observed that SSP addressed these information failures to a greater extent. Through the experience of others, people learned how Sehat card (insurance card) works and what benefits it has provided to its holders. Generous benefits of Sehat card also updated belief of people about insurance who cited religious reasons for not purchasing it.

By addressing information failures as such, SSP caused considerable learning about substitute of out-of-pocket expenditure, pre-payment of healthcare finance, in the form of Sehat

card. This study finds that individuals were positive about it and appears to be nudged towards this alternate healthcare finance.

6.2 Policy Recommendations

Healthcare in KP is financed in four modes: 1) Public provision [e.g., government hospitals], 2) Out-of-pocket payment, 3) National Health Insurance [i.e., Sehat Sahulat Program], 4) Private health insurance.

Mode 3 requires a little explanation. In PC-1 of SSP, it was referred as 'Social Health Protection Initiative'. By definition, a social scheme is one which has a contributory arm (through mandates or compulsion) and participants contribute according to their ability (i.e., some fix percent of income) which makes it progressive (i.e., high income means high contribution). In contrast, a national scheme is one which is financed through general tax revenues. Since SSP is financed through tax revenues, it is inappropriate to call it social health insurance.

In the middle of this study, KP government announced to expand SSP to all population. It would be free and financed with general tax revenues, which would require roughly PKR 15.5 billion per annum. It is unprecedented for a developing country like Pakistan to have national health insurance scheme fully financed with tax revenues. In fact, only one country, Canada which is highly developed, is doing so. The UK healthcare is also financed with general taxes, but it lies in mode 1.

It is also unprecedented for a developing country to have two parallel healthcare finance systems (i.e., public health structure such as government hospitals and national health insurance), both financed with general tax revenues.

Expansion of SSP to all population for free seems financially not feasible for a resource limited province. There are management concerns as well. A contributory arm in form of independent or

semi-independent sickness funds as in other SHIs around the world would be required to ensure sustainability and efficiency. This contributory arm could be through mandates such as compulsory enrollment of formal sector workers as in Germany, France, Japan, South Korea and enrolling informal sector workers on voluntary basis as in China, Vietnam. This study shows that experience of people with SSP is positive and that such arm may be possible.

In case the KP government enroll the remaining 30% of the population for free, the opportunity window for piloting a contributory arm for well-off segment of the society, as intended in PC-1 and PC-2 of the scheme, will be lost. However, the possibility of a contributory arm is still possible in the form of availing extra features in addition to the default plan.

For instance, at present beneficiary can get hospitalized only in general ward. But a person may want to get hospitalized in a private room instead. He can avail this if he pays top-up on premium paid by government. The to-be insured 30% population includes judges, healthcare professionals, academia, business class etc. They are well off and well aware. Features as such will be very appealing to them. In addition to generating revenue, it will increase the popularity of the programme and increase the feasibility of compulsory enrollment of formal sector employees in case the government plans it in future.

Similarly, the current scheme does not cover outpatient services (OPD) which is very essential. Medical professionals consider it more important than in-patient services because it is the first step in seeking healthcare and if delayed it can lead to expensive, complicated health conditions. OPD can be included as an extra feature to pay for.

As discussed in detail in chapter 2, a government intervenes in insurance market to create economies of scale for insurance providers and thereby reduce premium to an affordable level for large segment of population. State Life has achieved a greater economies of scale with SSP as

evident by low premium. The government can capitalize this by adding a contributing arm. Its operating cost would be relatively high, but it would be distributed across the pool, making premium more affordable in comparison to market rate.

6.3 Further Research

The next phase of the scheme will probably be launched soon. However, it is not yet confirmed whether the remaining 30% of the people will be insured at once or in phases. From State Life point of view (which has won the bidding for the next phase), the later would make more sense. This provides an opportunity for further research in the same line in other districts. This study chose district Peshawar and Charsadda for some obvious reasons. First reason was to control for healthcare supply. For instance, almost 100% of the beneficiaries from district Peshawar are treated in Peshawar, whereas 70% of the beneficiaries from district Charsadda traveled to Peshawar for treatment. Both districts border each other and well connected. Regions where quality healthcare providers are not available such as former FATA, Sehat Sahulat is not likely to have influenced their behavior in favor of pre-pay for Sehat card.

Another reason was utilization-to-enrollment ratio, which was above average in both districts. It was assumed that high ratio would imply high social learning about the scheme. In line with the current dynamics of the scheme, it would be a good contribution to study attitudes of people in the study district and other districts (especially) Kohat and Mardan—where social learning seems to be high because the programme was piloted there—towards pre-payment for extra features such as OPD, private rooms etc.,

The respondents in this study were mostly informal sector workers. Their income was moderate, which was expected. The flat premium they were asked they would pay was according

to their expected economic status and therefore cheap. For the next phase, the government has agreed to pay around PKR 2800 premium per family. It needs to be investigated that what would be the attitude of upper-income class towards voluntary contribution for a higher premium, say PKR 5000 per annum. It would inform about the possibility of cross-subsidization in the scheme.

Recently, Security and Exchange Commission of Pakistan has recommended the government to introduce compulsory insurance for private sector employees. In a real government insurance system compulsion is necessary for controlling adverse selection and sustaining a pool. A study about the attitude of formal sector employees towards compulsory enrollment in the ongoing scheme would be a good contribution.

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APPENDICES

A. Healthcare finance modes

(i) Government revenues: Healthcare is predominantly financed with government tax revenues. For example, Beveridge model of United Kingdom, and Canadian National Health Insurance. Private insurer supplements the remaining uncovered services.

(ii) Compulsory contribution payments: Revenue is raised through compulsory payroll taxes as in Germany (it is also called Bismarck model) or through compulsory payment such as Community Based Health Insurance (CBHI) in Rwanda.

(iii) Voluntary contribution payments: Payment is voluntary such as market-based health insurance in the United States, and voluntary CBHI in Ethiopia.

B.

Consider two persons, A and B. Both independently face binary outcomes: 1) fall sick and get treated for PKR 1000, 2) no-sickness, PKR 0 on treatment. In case of no pooling, the worst outcome (loss of Rs.1000) has a 50% chance for each person to face. But if both agree to share risks, then instead of binary outcome they face four outcomes: 1) Both fall sick, 2) A gets sick, but B does not, 3) B gets sick, A does not, 4) Both are not sick. Here the probability of worst outcome (1) falls to 25%. It will keep on falling with the addition of more people. Thus, pooling risk will make risk-averse individuals, who has a diminishing marginal utility of income, better-off.

C.

Specification of the model

A binary logistic regression was performed to observe explanatory power of different predictors on the decision to enroll voluntarily in Sehat Sahulat Program. Following Hilbe (2009), a

univariate logistic regression was performed for each predictor. Predictors having a parameter p-values less than 0.30 were retained.

$$\textit{Willing to Enroll}_i = \beta_0 + \beta_1\ \textit{IncomeGroup}_i + \beta_2\ \textit{AgeGroup}_i + \beta_3\ \textit{EducationGroup}_i + \beta_4\ \textit{Chronically Ill}_i + \beta_5\ \textit{UrbanResidence}_i + \beta_6\ \textit{Household Size}_i + \varepsilon_i$$

Where,

Willing to Enroll is the response, binary variable that takes 1 if household's head is willing to enroll and 0 if he is not. The following predictors are added to the model.

Income is a numerical variable that captures monthly income of household's head. Providing a range of Rs. 5000, it was divided into four groups: A. Rs 1500—19000, B. Rs 20000—24000, C. Rs. 25000—29000, D. Rs. 30000 plus. It enabled to see effect of different income groups on willingness to enroll. Group A (Rs 1500—19000) is taken as a reference group.

Age is the age of household's head. It is divided into three groups: A. 25—29, B. 30—39, C. 40+. Age group 25—29 serves as a reference group.

Education is the highest level of education attained by household head.

Chronically ill is a binary variable that captures whether a family has a chronically ill person at present or in the recent past (last six months).

Household size is a continuous variable that captures number of members in a household.

ε_i is error term.

QUESTIONNAIRE

Demographics of Respondent

Is the respondent head of household?	No | Yes
Gender	Female | Male
Is the respondent married?	No | Yes
Age of household head	_____ (continuous)
Household size	_____ (continuous)
Education of respondent	_____ (categorical)
Is any household member chronically ill who needs hospitalization?	No | Yes
Was any household member chronically ill in past six months who was hospitalized or needed hospitalization?	No | Yes
District of residence	Charsadda | Peshawar
State of residence	Rural | Urban

Economic Status

Monthly Income of household.	_____ (continuous)

Insurance Literacy

Does respondent have basic insurance literacy?	No | Yes
Does he know about insurance/bima?	No | Yes
Does he know about Islamic insurance, takaful?	No | Yes
Does he know about annual payment (premium) in insurance?	No | Yes

Does he know SSP is an insurance scheme?	No | Yes
Willingness to pay	
Did he show willingness to pay Rs 2200 annually for Sehat Insaf Card?	No | Yes
In case of negative answer, what was the reason of his refusal?	• Expensiveness • Not needed • Others have got it for free, so should I. • Religious reason • Already insured
If respondent is insurance literate	
Has he ever bought insurance?	No | Yes
If not, what was (were) the reasons?	• Expensive • Information/Search Friction • Lack of trust on insurer • Unaware of expected benefits • Religious cause • Other reasons

Social Capital

"Suppose KP government creates a fund in which people from all over KP contribute PKR 2200 annually. So, if you fall ill, contribution of other people will be used for our treatment. In case you didn't get sick, your contribution will be used for treatment of other members. Will you contribute to such a fund?"

Is he willing to contribute to a hypothetical sickness fund?	No | Yes
How much would he trust government for running such fund?	Scale 0—5, where 0 means no trust, 5 means high trust.
How much would he trust a private entity for running such fund?	Scale 0—5 where 0 means no trust, 5 means high trust.