

Subjective Well-Being, Decent Work and Social Capital of the Informal Workers from Hooghly District of West Bengal

Thesis submitted to Jadavpur University
For the Degree of
Doctor of Philosophy (Arts)

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10/1/2022

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Certified that the thesis entitled

Subjective Well-being, Decent work and Social capital of the Informal Workers from Hooghly district of West Bengal submitted by me for the award of the Degree of Doctor of Philosophy in Arts at Jadavpur University is based upon my work carried out under the supervision of Dr. Amit Kundu, Professor, Department of Economics, Jadavpur University. And that neither this thesis nor any part of it has been submitted before for any degree or diploma anywhere /elsewhere.



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Dated: 10.1.2022

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Working on this thesis and delving deep into the different theories and concepts of well-being (especially work-related) have compelled me to reflect critically on many of the heavily normalized values we have grown up with. And the pandemic and its worldwide socioeconomic impact along with the several almost-simultaneous mass movements have only strengthened these reflections. In the literature of informal work, we describe ‘hazardous working condition’ as something which causes physical injury, chronic illness, disability and even death. Without diluting their gravity, I would like to extend this idea to point out that the culture of work and education that we are trained to adhere to since childhood is nothing short of hazardous. This culture of brilliance, efficiency and professionalism, this glorification of shining under pressure- they claim lives. In every literal sense. The pressure and sense of urgency in the name of efficiency and professionalism, they create unnecessary competition, insecurity, stress, and loneliness, robbing us of any sense of self-worth and genuine fondness we have for ourselves. And they systematically push us into the cycle of depression and chronic anxiety. We do not even identify them until one day, for no apparent reason, we stop functioning. Mental health disorders cause disabilities. And they will be the single biggest cause of disabilities in the coming decade (according to WHO). The pandemic merely aggravated this and brought this into public discussion once again. But even in 2017, one in seven people suffered from

some kind of mental illness in India. So as someone who has suffered from depression and anxiety for almost the entire period of Ph.D., I would like to once again remember my friends, my mother and my supervisor for knowingly and unknowingly supporting me throughout. My friends and I, we are broken and imperfect. And we related with each other through our brokenness and imperfections. My mother is not familiar with the mental health discourse. But she always noticed that something is wrong, tried her best to understand the problem in her own ways and never gave up. My supervisor will definitely not pass the contemporary social media tests of 'wokeness'. But his kindness and patience are the only reasons I have been able to finish this work without breaking down in the middle and being forced to quit. Lastly, on this same note, I like to acknowledge the relaxed free-to-be environment that has been my general experience in Jadavpur University for the last 13 years. This culture of support and softness, however flawed, is what (has been) protected me and many others from being crushed under the ever-increasing pressure of achieving. We called it 'lyadh' in lighthearted amusement to occasional disdain. But today I can confidently say, in a world of efficient production where our worth is measured by our working capacity, the art of so-called 'doing nothing' is no less than revolutionary.

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-Breeta Banerjee

Executive Summary

This study is an attempt to understand well-being of informal workers using alternative non-monetary concepts of evaluating well-being. Informal economy has been historically proven to be an integral structural component of the post-globalization capitalist economy. Today informal workers constitute the majority of global labour force, and around 90% of Indian labour force according to the 2018 estimate of International Labour Organization. Broadly, informal enterprise is characterized by small unit size and lack of registration, and informal employment is characterized by lack of work-based benefits and legal security. By definition, informal labour force includes both employment in informal sector and informal jobs in formal sector. In developing world, participation in informal economy is often more driven by survival need than growth opportunity. As lack of legal restrictions causes uncertainty and vulnerability regarding employment security, it also enables easy entry. Therefore, although informal economy has high coincidence of poverty and precarious jobs, it often acts as a safety net for poor people. Moreover, systematic inequality pushes the people at lower strata in informal economy for survival. And being a way of survival of poor and also a source of cheap labour and input of big formal enterprises, informal economy exploits poorer and more marginal workers disproportionately and keep them stuck in poverty as well, thus contributing to inequality. Hence, lack of protection of labours' rights and well-being in informal/non-formal employments result in deepening inequality (as it hurts more the marginalized section with lesser bargaining power) and a decline of collective social well-being in long run, ultimately offsetting the well-being gain from employment opportunities generated through flexibility and limited liabilities of informal economy. Informal workers' well-being is subject to a complex network of socioeconomic systems which cannot always be separated. Hence we have addressed well-being of the informal workers from a holistic approach, using the concept of subjective well-being i.e. self-reported evaluations of well-being. Additionally, two more specific concepts have been considered. Since our concern is informal workers and therefore 'work' is an integral part of their existence, we can broadly divide this complex network of socioeconomic systems into work related and non-work related strands. For the work related well-being we have considered the concept of decent work. For the rest, we have considered the concept of social capital. Decent work is an idea of 'good work' which aims to improve an worker's life through employment, social security, workers' right and social dialogue. Social capital

is understood as an intangible form of capital derived individually and collectively from the social environment we live in. Both decent work and social capital are necessary for sustainable well-being. Although these two concepts are far from being exhaustive in capturing every aspect of individual well-being, together they cover a significant portion. The main research objectives addressed in the thesis are: enquiring the state of overall well-being of the informal workers in terms of subjective well-being, enquiring the quality of work of the informal workers in terms of decent work condition and enquiring the state of social capital of the informal workers.

The study is based on data from an individual-level primary survey in the rural and urban areas of Hooghly district, West Bengal, India. One municipal corporation and two gram panchayets were randomly chosen from a total 13 corporation/municipalities and 18 blocks under four sub-divisions. Quota sampling technique was adapted to select a final 542 responders through face-to-face interviews. The responders were engaged in 22 major informal activities identified in the survey area and hailed from households primarily supported by informal activities. Majority of the responders were Hindu men from general castes. Age of the responders ranged from 14 years to 76 years, average being 38 years. 35% of them had never gone to school. The 22 main occupations have been categorized under three broad groups- self-employed (37%), regular wage-earner (33%) and casual labour (30 %) using 'usual principal activity status' approach i.e. what has been the main economic activity of the responder in last 365 days or one year. Based on the information provided by the responders, we have constructed three individual-level indices to evaluate subjective well-being, decent work condition and social capital for each responder. Then we have used simple econometric methods to explore their relationship with other demographic factors and select material indicators of well-being and lastly, to each other.

In chapter 6 we have attempted to evaluate subjective well-being of the informal workers. We have constructed an individual-level composite index using geometric mean. The final index (SWB) is a combination of two sub-indices- life satisfaction index (LS) and psychological well-being index (PWB), and contains information on a total 15 indicators under these two broad categories. The main question we wanted to find answer was whether subjective well-being of the informal workers is influenced by their income or not. Our question was motivated by the Easterlin paradox which implies that while richer people are generally happier than poorer people, in long run (10 years or more) increase in income level doesn't reflect as increase in happiness after a point. Simple OLS models

have been used to investigate the impact of income on subjective well-being. For explanatory variables, we have considered two types of income- individual monthly income and household percapita monthly income, along with property ownership, having social security scheme and other control factors like age, gender, marital status, religion, caste, education, to name a few. To get better insight, we have considered the composite index (SWB) as well as the two sub-indices (LS and PWB) as indicators of subjective well-being. Further, we have tested the models on smaller groups of responders separately in two segregated analysis-across residing areas (two groups) and across work categories (three groups).

Our findings suggest that income has a strong positive but diminishing effect on subjective well-being as well as life satisfaction and psychological well-being of informal workers. Moreover, self-employed workers and casual labours tend to have lower level of subjective well-being than regular wage-earners. And workers in rural areas tend to have higher subjective well-being than urban informal workers. Factors influencing life satisfaction differ from factors influencing psychological well-being. Also, factors influencing subjective well-being differ significantly across residing areas. The most stark difference is that neither income nor property-ownership has any significant effect in SWB of rural workers, unlike their urban counterpart.

In chapter 7, we have attempted to evaluate the decent work achievements of the informal workers by constructing an individual-level decent work index. We have used the seven work-related security dimensions following ILO's People's Security Survey from mid-2000 to select the decent work indicators. These dimensions are labour market security (addressing the ability to find a job given market condition), employment security (addressing the conditions of having a secured and sustaining job after one finds it), work security (addressing the conditions under which one performs the job), job security (addressing the appropriateness of the job for the worker), income security (addressing the adequacy of the remuneration from the job), skill reproduction security (addressing the skill building, ease of skill-transfer and growth opportunity the job provides) and representation security (addressing the workers' voice and their representation in social dialogue). Indicators under each dimension have been aggregated using arithmetic mean to create seven sub-indices. The final decent work index is calculated by taking the sum of all the seven normalized sub-indices. The main question we have addressed in this chapter is finding out how supply-side factors like education influence decent work achievements of informal workers for the present study. In the present sample, around 54% of

responders have crossed the barrier of primary school education. But only around 18% of the total responders have received any kind of vocational training. Therefore the effect of years of schooling may indicate what kind of return formal education can yield in terms of decent work if there is not adequate support of vocational training and skill building. Additionally two other supply-side factors have been considered- property ownership and dependency ratio (number of household member per earning member). Overall decent work condition has been measured by the composite decent work index (DWI). We have used two sets of OLS models to see whether the effect of education differs across residing areas and across gender.

Our results show that composite decent work index decreases at an increasing rate with years of schooling, strengthening the idea that for the people who are likely to end up in unskilled and semi-skilled employment sectors, the short-run cost of acquiring basic education exceeds its long-run benefits. We have also found income, skill-reproduction and representation security have the minimum average contributions towards overall decent work achievement of the responders (around 21% together). This is evident as 51% of the workers earn less than Rs. 25 per hours, 55% of the workers can't make any monthly savings (22% for rural workers, 73% for urban workers), 87% of the workers are not unionized, and 83% of the workers do not have any formal training (approximately).

In chapter 8 we have attempted to evaluate social capital of the informal workers. We have used the structural-relational-cognitive construct of social capital for constructing the individual-level social capital index. Structural social capital is understood as the interpersonal and impersonal connections an individual possess can derive benefit from. Relational social capital relates to the nature and quality of interpersonal relationships like trust-trustworthiness, expectations, norms and obligations. Cognitive social capital is the shared language, codes and narratives, value, cultural and social norms. For social capital index as well, we have used arithmetic mean as the method of aggregation. The three sub-indices i.e. structural, relational and cognitive social capital index combine 13, 15 and 5 indicators respectively. The final composite social capital index is the sum of the three normalized sub-indices. The main problem we have addressed in this chapter is whether social capital should be considered as a tool for poverty alleviation. More specifically, we have investigated the effect of social capital on income subject to existing socioeconomic condition of the responders. Our question is motivated from the widespread notion of social capital as a driver of development and a tool for poverty alleviation despite its possible limitations from existing socioeconomic constraints especially

relevant for poor people. Simple OLS models have been used for this exercise. For social capital we have used the composite index as well as the three sub-indices to get a deeper insight. For income we have considered individual monthly income. As the earning pattern and associated uncertainty vary across the residing areas and types of work, we have divided the responders into six groups: rural self-employed, rural wage-earner, rural casual labour, urban self-employed, urban wage-earner and urban casual labour. Then two indicators have been combined for existing socioeconomic condition or affluence - whether the responder owns any house/land or not (property ownership), and whether a responder's income lies above their group-average household percapita monthly income or not. If their income falls below the group-average then the responder is at the poorer side of income distribution. A responder is considered to be affluent if their household percapita income lies above the respective group average and they own a house/land. Along with these variables, some other demographic factors are considered such as- age, years of schooling, types of activity, residing area, gender, religion, caste and marital status. Further, we have used the previous models for three segregated analysis- across residing areas, across work categories and across gender.

Our findings suggest that increase in social capital generally tends to enhance income for workers, but income gain from same amount of increase in social capital is much higher for workers with better socioeconomic condition. In fact, cost of increasing social capital can outweigh the economic benefit of increased social capital if existing socioeconomic condition is not adequate. Because not only the impact of social capital on income is heavily influenced by existing socioeconomic condition of responder, social capital can even have detrimental effect on income if those conditions are not favorable. When other factors are considered, increase in social capital tends to enhance income for workers (and more for workers with better socioeconomic condition) most in cases of- urban informal workers compared to rural workers, self-employed workers compared to other two work categories, and male workers compared to female workers.

Lastly in chapter 9, we have tried to find out the relationship among subjective well-being, decent work and social capital of the informal workers. We have investigated three questions: whether there is any correlation present among the three indices, whether a responder scoring high in one index scores high in other indices as well, and whether decent work and social capital contribute to subjective well-being. Our main motivations were to see whether these three concepts signal similar levels of well-being and whether as determinant of well-being, decent work and social capital actually contribute to subjective well-being (a constituent of well-being). For the first question we have used a

simple correlation analysis. For the second question, we have created quartile variables of the indices which take discrete categorical values representing the number of quartiles, four in this case. For instance, index value belonging to fourth quartile takes the value 4 and so on. We have plotted these variable against each other to see whether values belonging to higher quartile of one index have associated values of another index belonging to higher quartile. For the third question, the previous regression models (of investigating the relationship of subjective well-being with other relevant socioeconomic factors) from chapter 6 have been considered to check whether adding decent work and social capital as additional explanatory variables improve the explanatory power of the model.

Our findings suggest a general positive association among all these constructs. Although the associations are often weak and insignificant except for social capital and decent work i.e. there is positive association between good quality of work and high social capital. The results also suggest that social capital contributes to subjective well-being of informal workers when considered with other relevant socioeconomic factors. This finding is consistent with the existing literature. The impact of decent work is not pronounced. Our study generally indicates that even though quality work is often accompanied by high social capital, social capital has larger positive impact overall well-being than decent work achievement.

The main takeaway from this study is that subjective measures of well-being tend to get influenced by material conditions and achievements of life and income is a strong influencer of well-being for informal workers who come from the poorer section of society. We find few key points that stand out from our findings for their implications on research and policy related to well-being of informal workers and well-being in general. The first one is the relationship between decent work and education. One of our findings suggests a negative effect of years of formal schooling on decent work condition. Education is an important supply-side factor which helps formation of human capital. Therefore such finding is apparently counterintuitive. A possible reason that we have identified is the lack of vocational training and huge number of cases of early drop out. Together they can make the short-run cost of getting formal education higher than the potential benefit it can generate in long-run from semi-skilled or unskilled occupations. There can be two ways of addressing this issue-reduction in cost of elementary education and vocationalization of education (which increase long-run benefit). The problem with vocationalization of education (that can benefit people likely to end up in semi-skilled/unskilled occupations) is that it has the potential of legitimizing child labour. Also, this kind of training can further reduce their social mobility and trap them within elementary occupations as

future option. Therefore, a better way will be policies to reduce the money and resource cost of acquiring elementary education. The second one is the role of social capital as a tool for poverty alleviation. We argue against notions like ‘social capital is the only capital available for poor people’ or considering social capital as a mean to alleviate poverty condition, because the potential of social capital to enhance income and other economic outcomes are limited by the existing socioeconomics conditions, as our findings suggest. Poverty alleviation requires upward mobility of poor people while social capital mostly acts for them as a safety net against poverty and income/resource uncertainty. Also, since existing socioeconomic condition is often the result of historical and systematic oppression and marginalization, if development policies targeted towards building and maintaining social capital are not sensitive towards such realities, social capital can be detrimental towards livelihood and poverty condition of poor and marginalized people of society. The last one is the question of whether subjective measures of well-being provide superior insight compared to the objective measures of well-being. In this study we have considered a completely subjective individual-specific measure of well-being along with two different concepts that can closely influence well-being-decent work (mix of subjective and objective indicators) and social capital (mostly subjective indicators). It is found that even though all of them indicate something ‘good’ and ‘beneficial’ about one’s life and in that sense, ‘well-being’ of an individual in some way or other, they do not necessarily go in the same direction simultaneously. Also, all of these subjective measures tend to get influenced by material conditions and achievements of life. Therefore two points become clear. Firstly, well-being is multi-dimensional and different concepts of well-being capture different non-substitutable constructs of well-being. Secondly, subjective measures of well-being do not exist in isolation and they interact with all the objective aspects of well-being. Moreover, because of their subjective nature, they are particularly sensitive to social conditioning to fulfill particular political agenda. Therefore, though subjective well-being provides valuable information that objective indicators miss, considering them without complemented by the objective measures can be misleading and harmful.

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Chapter 1: Introduction

This study is an attempt to understand well-being of informal workers using alternative non-monetary concepts of evaluating well-being. Informal worker is a familiar term in developing world. Yet our understanding of informal workers is often limited and unclear. The types of jobs we commonly associate with informal workers are mostly elementary occupations like street vending, cleaning and help, housekeeping tasks, factory and construction labour, farming and fishing. But can we perceive a private tutor teaching students at home as informal worker? Or a college graduate data entry operator hired for two weeks by a big company to handle peak season rush? On the other hand, a housekeeper working in a hotel with a permanent job contract, salary and benefits should be considered a formal worker even though their job profile will overlap with the tasks performed by a domestic household help working without any legal contract or worker's benefit. If we look at National Classification of Occupations (2015) which classifies occupations according to the similarity of tasks performed and their required skill levels, we will readily identify the 'known' or familiar informal occupations which are mostly concentrated in the semi-skilled and unskilled occupation groups. A lot of these occupations are in unorganised or informal sector and many of these occupations are carried out under precarious condition, offer poor salary, and often lack benefits, legal contracts and protections- some features that have been historically associated with informal work.

With the advent of globalization, liberalization and corporatization, the formal sector has undergone massive transformation worldwide. There has been a constant pressure towards easing labour rights standard which were deemed too rigid to promote growth and employment. As a result, we saw a world-wide trend of informalization of formal sector i.e. outsourcing, decline of permanent jobs in formal sector, lay-offs, longer working hours, reduction in job security and benefits became more and more rampant. The formal-informal divide is further blurred with the rise of gig economy in the last decade where workers/service providers and employers/consumers interact and exchange over digital platforms like Zomato, Uber. Gig economy has presented us with a further warped employer-employee relation where the traditional subordinate relationship is replaced by a multi-party employment arrangement with such platforms acting as brokers. Here the monetary transactions take place through the formal financial channels but other aspects like salary level, working hours, and working conditions remain informal in nature. Such new forms of short term flexible employments are providing opportunities and ways of innovation for innumerable individuals and small businesses. But at the same time, lack of definition, legislation and absence of proper employer-employee relationship

are resulting in limited liability of the employers and leaving the workers in uncertainty and vulnerability. The agitations by Zomato and Swiggy delivery partners for better salary (happened during Covid-19 pandemic lockdown) are mere reflections of such discontents. Today majority of global labour force are engaged in various non-formal employments. The rapid expansion of the middle area between formal and informal employment (such as gig economy) is viewed both as a way of formalizing the informal employments and also as possible future shape of formal employments. In any case, informal employments will continue to be a permanent and significant part of global economy in future. While informality keeps providing a safety net as well as growth opportunities for a huge population, lack of protection of labours' rights and well-being in informal/non-formal employments will result in deepening inequality (as it will hurt more the marginalized section with lesser bargaining power). Hence there will be decline in collective well-being of society and ultimately it will end up offsetting the short-run benefit of profitability and employment opportunities generated through flexibility and limited liabilities. A glimpse of such future can already be seen in the Great Resignation, a major contributing factor behind the labour shortage in post-pandemic US economy.

This study conceptualizes informal workers as individuals functioning in a complex network of socioeconomic systems. Therefore their well-being will have more than just the economic dimension. Accounting for all such dimensions is beyond the scope of this thesis. So here we have focused on their overall well-being. The concept of subjective well-being has been used to evaluate overall well-being. Additionally we have considered quality of work (evaluated using the concept of decent work) and state of social capital.¹ We have attempted to construct individual-level indices to evaluate these three aspects of well-being. Then we have tried to see how they are interrelated and how the latter two influence overall well-being. Data from a primary survey conducted in Hooghly district of West Bengal has been used to carry out this empirical exercise. Chapter 2 of the thesis presents the general theories and concepts related to informal workers and their well-being relevant to this study. Chapter 3 presents an overview of literature. Chapter 4 describes the main research questions addressed in the

¹ Social capital is understood as an intangible form of capital derived individually and collectively from the social environment we live in. Social capital does not always automatically translate into well-being for all, but it closely influences them.

thesis. Chapter 5 discusses the methodology. Chapter 6 -Chapter 9 try to find answers to the main research questions. Chapter 10 summarizes the findings and concludes.

Chapter 2: General Concepts and Definitions

2.1. Informal economy and informal workers

Informal economy existed throughout human civilization like an ancient living organism - evolving and adapting to new systems but never gone extinct. Informal economy is commonly understood as the economic activities outside legal regulation and protection. Before the term ‘informal sector’² was introduced in early 1970s, informal economy was understood simply as the non-industrialised traditional sectors. These sectors were believed to be absorbed into the formal capitalist sectors through appropriate industrialization policies; a notion that was popular post-WWII and further supported by examples like the rapid technical advancement of war-torn Japan. But in early 1970s it was observed that instead of disappearing, those traditional sectors had grown efficiently and profitably in many under-developed and developing countries of Africa. Similar trend was noticed in other parts of developing world as well which were suffering from widespread unemployment, something that economic growth alone could not solve. International Labour Organization used ‘informal sector’ to denote this newly discovered modified and expanded traditional sectors in 1972 (ILO, 1972). With the advent of globalization around 1990s a worldwide casualization or informalisation of employment started taking place- starting from downsized and flexible production units to jobs with lesser protection and benefits, a process continuing till date. Therefore presently informal economy is understood to be consisted of every form of informal employments which spans beyond informal or unorganised sector and takes into account ‘nature of employment in addition to the characteristics of enterprises’ (Chen, Vanek and Carr, 2004).

The dominant schools of thought on informal economy

How to perceive informal economy? The expansion of informal economy posed a challenge to the contemporary neoclassical economic theory of industrialization and growth. Therefore even though the economists and researchers were optimist regarding their observations in those African countries, informal economy initially met with a lot of skepticism regarding its role in modern capitalist economy and development. The four schools of thought that summarize these views are namely dualist, structuralist, legalist and voluntarist. Dualist school of thought perceives informal activities as marginal and delinked from the formal economy (ILO, 1972). This school lost some of its relevance with the massive informalisation in the formal sectors. Structuralist school of thought considers the

² The term was coined by Keith Hart in his 1971 study on economic activities of Ghana, published in 1973 (Hart, 1973)

interdependence between informal and formal economy and understands informal sector to be subordinate to the large industrial sector which get benefitted from the cheap input supply from informal sector (Castells and Portes 1989). Thus informal economy exists not for lack of growth and formal sector jobs but as a natural phenomenon due to the very nature of capitalist development (Chen, Vanek and Carr, 2004). Legalist school focuses more on micro entrepreneurs and suggests their operating in informal sector is a response to the cost barrier of formal registrations that makes the formal sector inaccessible to small players and proposes simplification of government rules and regulation as a way to help them (De Soto, 1989). Lastly, voluntarist school of thought also focuses on micro entrepreneurs and contrasting with the legalist school, they perceive micro entrepreneurs' operating in informal sector is a choice to evade taxation and proposes expanded legal framework to bring them under formal economy to increase tax base (Maloney, 2004; WIEGO, 2014). As the present definition suggests, informal economy embodies elements from all these schools of thought. Informal economy comprises of traditional sectors delinked from formal economy as well as subordinate industries and casualised jobs interlinked with formal economy and also enterprises operating informally by choice to remain profitable. Therefore, rather than looking through these lenses, informal economy should be seen in a broader holistic view to get the complete and more realistic idea.

Issues of informal economy with respect to development

A dominant point of view about informal economy always has been that it should not exist ideally and should be transitioned into formal economy. The reasons behind such view range from notion about its inefficiency and lack of contribution to economic growth to the coincidence of informal employment with poverty and precarious work conditions due to lack of legal regulations. A particularly harmful reason would be the stigmatized view that informal economy is consisted of illegal activities and black markets. Such views are often guided by ignorance and misconception towards unregistered economic transactions to be illegal³. However, informal economy has been proved to be a permanent structural component of modern world economy, 'the base' of total economy as Chen, Vanek and Carr (2004) have described. Today it is the largest employer of global labour force- 60% worldwide (ILO

³ The 2016 demonetization exercise in India (which banned 86% of currency in circulation consisted of 500 and 1000 rupee notes overnight) saw a surge of such misguided belief in popular mind afterwards. The result was devastating for India's informal sector.

2018). As an integral part of economy, as the largest employer of global labour force and with the high coincidence of poverty, betterment of informal economy is therefore crucial for development and poverty alleviation.

In developing world, participation in informal economy is often driven by survival need rather than growth opportunity. As lack of legal restrictions causes uncertainty and vulnerability regarding employment security, it also enables easy entry. Therefore informal economy often acts as a safety net for poor people. As pointed out by Sastry (2009), since poor people cannot afford to remain unemployed for a long time, 'working poor' (i.e. engaging in economic activity that provides subsistence level of earning or even below that) is a more relevant and widespread incident than absolute unemployment level in countries like India. The study brings out another important aspect of poverty associated with informal workers that incidence of poverty depends more on the nature of employment (self-employed/casual labour/ regular wage-earner) than absolute rate of employment. Because casual labours (which includes agricultural labours) suffer most from unavailability of work.

Informality has been a constant structural component of globalization and growth, the other constant component being income inequality. The connection between informality and income inequality is complex. While persistent inequality is unanimously bad, the effect of informality is not straightforward for population with a substantial presence of poverty. Two very recent reports by World Bank (Ohnsorge and Yu 2021) and International Monetary Fund (Deléchat and Medina (Ed.) 2021) have presented informal economy as a deterrent of economic growth and cause of inequality and slow recovery of pandemic-hit economies and suggested ways out to tackle the problem of informality like policies to extract the missing revenue from informal GDP. Many other studies have echoed the same opinion that informality causes rise of inequality and negatively affects development (Binelli, 2016; Messina and Silva, 2017; Rosser, Rosser and Ahmad, 2000). Researchers like Gutiérrez-Romero (2010, 2021), Elveren and Özgür (2016) have pointed out the other side of the cyclical causality i.e. inequality, especially historical inequality, through low capital formation leads to higher degree of informality. Dell'Anno (2021) argues that informal economy provides employment to low-skilled workers and helps move towards more equitable distribution whereas high inequality leads to bigger size of informal economy. And informality-reducing policies based on carrot-and-stick usage of tax can increase inequality and unemployment. Since informality is a structural component of modern economic systems, there is a cyclical reasoning prevalent. Systematic inequality pushes the

people at lower strata in informal economy for survival. And being a way of survival of poor and also a source of cheap labour and input of big formal enterprises, informal economy exploits poorer and more marginal workers disproportionately and keep them stuck in poverty as well, thus contributing to inequality. But presenting informality as ‘cause’ for inequality and disrupted development strengthens the stigmatized view of informal employment and further hurts the people who suffers most from the existing inequality. Chen (2019) has aptly put forward two kinds of informality of present times. One is informality at the bottom of the pyramid where poor informal workers stand and get punished for their survivalist practices which are often deemed illegal. And the other is informality at the top of the pyramid where the richest and most powerful entities are protected and provided tax havens and sanctions by the authorities to remain rich. The study summarized, “In conclusion, the real challenge of informality and inequality is the clash between informality of the elite and informality of the poor and the tendency of governments to privilege the rich and powerful to the detriment of the poor and powerless.” (Chen, 2019).

Definition of informal economy

Definition of informal sector follows an ‘enterprise approach’ whereas definition of informal workers follows a ‘labour approach’. The first attempt to create an international standard for defining informal workers happened in 15th International Conference of Labour Statisticians (ICLS) in 1993. They used an ‘enterprise approach’ i.e. informal sector was identified based on the characteristics of the production units and informal employment included employment in informal sector only. As informalization of formal sector increased, in 17th ICLS a major revision occurred as the ‘enterprise approach’ was replaced by the ‘labour approach’ i.e. instead of production units, nature of employment relationship was considered to define informal employment. Formality of an enterprise is generally determined by its status of registration, level of organization, size of unit (i.e. number of workers). And formality of employment relationship is determined by its legal recognition by the existing labour laws of the respective country, and the amount of security against work-related risks and uncertainty ensured by the employment, like insurance, old age benefit, paid leaves (ILO 2019a). Table 1 presents the conceptual framework proposed by the 17th ICLS which has been the internationally accepted standard of identifying and measuring informal employment (the operational definitions varying across countries).

Table 1: Conceptual framework of identifying informal employment by 17th ICLS

Production units by type	Jobs by status of employment								
	Own-account workers		Employers		Contributing family workers	Employees		Members of producers' cooperatives	
	Informal	Formal	Informal	Formal		Informal	Formal	Informal	Formal
Formal sector enterprises	NA		NA		1	2		NA	
Informal sector enterprises(a)	3	NA	4	NA	5	6	7	8	NA
Households(b)	9	NA	NA	NA	NA	10		NA	NA

Note:

(a) As defined by the 15th ICLS (excluding households employing paid domestic workers)

(b) Households producing goods exclusively for their own final use and households employing paid-domestic workers.

- NA- jobs, which, by definition, do not exist in the type of production unit in question; Shaded cells-formal jobs, un-shaded numbered cells-informal jobs

Source: As cited in Accountability Initiative (2020)

According to Table 1, informal employment comprises of all the numbered cells except number 7, i.e. own account workers working in informal and household sectors, employers in informal sector enterprises, contributing family workers, employees holding informal employment and members of producers' cooperatives in informal sector. Cell number 7 depicts people holding formal job in informal enterprises. Though it sounds contradictory, this category represents people employed in informal enterprises who receive work-related benefits and security from their employers. The percentage of jobs coming under this category is always fractional.

The next major revisions happened in the 19th ICLS in 2013 and 20th ICLS in 2018 regarding concept of employment. 19th ICLS broadened the concept of employment from works done solely for pay or profit to incorporate unpaid employment, internships, volunteer work, and traineeships. Thus it created provision for accounting for the massive amount of unpaid work performed by women in households. 20th ICLS incorporated the concept of a new status of work, independent workers vs dependent workers (whose pay/profit is dependent on another economic entity). The category of dependent workers includes dependent contractors as well. Lying in between employee and own-account workers, dependent contractors are defined as “workers employed for profit who are dependent on

another entity that exercises control over their activities and that directly benefits from the work. The dependency may be operational as well as economic” (ILO, 2019). Thus this new status of work creates a provision for taking into account workers like industrial outworkers (often invisible and working from home), workers of emerging gig economies. In all these cases, individual countries are given flexibility to adapt these concepts according to their country requirements and set up the operational definitions.

Informal workers in India

Indian definition of informal sector has been provided by National Commission of Enterprises in Unorganized Sector (NCEUS) as “The unorganised sector⁴ consists of all unincorporated private enterprises owned by individuals or households engaged in the sale and production of goods and services operated on a proprietary or partnership basis and with less than ten total workers”(NCEUS, 2009). And they define informal workers as “Unorganised workers consist of those working in the unorganised enterprises or households, excluding regular workers with social security benefits, and the workers in the formal sector without any employment/ social security benefits provided by the employers”. Indian labour force has historically been informal in nature because of the presence of a large number of employment related to agricultural sector. NSSO data reveals that informal employment has been 91.5% and 92.3% of total employment in 1999-2000 and 2004-2005 respectively. It has also indicated a massive amount of informalisation of formal sector. In 1999-2000, 42.1% of total employment in formal sector was informal in nature. In 2004-2005 this figure rose to 46.2% (Sastry, 2007). Presently ILO estimates 88.2% of Indian workforce to be engaged in informal employment (ILO, 2018). A more recent study by Centre for Policy Research uses data from Periodic Labour Force Survey (PLFS) during 2018-2019 and estimates 80.2% of Indian labour force to be in informal sector and 90.1% of the total employment is informal employment. Presently, majority of informal workers are engaged in agriculture and allied sectors. If status of work is considered, majority of workers were self-employed (58%) followed by casual labours (26%) and wage-earners (16%). However, among self-employed group, only a small portion constituted by employers while most of the self-employed workers were single own-account workers (41%) and unpaid family workers (15%) (Accountability Initiative. 2020).

⁴ Here the terms ‘informal’ and ‘unorganized’ have been used interchangeably.

2.2. Concepts of well-being

According to Stanford Encyclopedia of Philosophy, “Well-being is most commonly used in philosophy to describe what is non-instrumentally or ultimately good *for* a person.” (Crisp, 2021). Well-being has been a crucial theme from medical studies to social sciences and humanities though its definition and understanding alters according to the respective area of study.

Theories of well-being

What is good for a person? Hedonism perceives well-being as greatest balance of pleasure over pain (Bentham, 1789). Therefore, according to hedonism ‘goodness’ of something is decided by how much pleasure or pleasant experience it can provide or how much pain it can reduce. Desire theory perceives well-being as the satisfaction one get from fulfillment of their desire (Heathwood 2016). Hence ‘goodness’ of something under desire theory is decided by whether it is desired by a person i.e. attaining it will give the person satisfaction. Compared to evaluating pleasure, evaluation of satisfaction from desire-fulfillment is a more plausible exercise.⁵ Moreover, if someone desires pleasure, desire theory can incorporate the idea of hedonism as well. These theories can be called subjective theories of well-being as they provide answer to a ‘why is something good’ beside the ‘what is good’. On the other hand, objective list theories refer to theories that come up with a list of things that are deemed to make life better. Hence the ‘goodness’ of the things lies in the fact that they are considered to make someone better off. What are these things, or why they make a person’s life better-is determined by an external rule that does not necessarily take into account their desirability to that person or their ability to generate pleasure. For example, breathing is an involuntary biophysical activity of an alive person which is necessary for staying alive. And a minimum air quality is required to ensure healthy breathing. Now breathing clean air does not necessarily induce pleasure, nor is it explicitly desired. But clean air does make a person better off, as absence of clean air will gradually diminish their life.⁶ Therefore, if ‘long healthy life’ is considered a ‘good life’ by theory, then clean air makes a person’s life better irrespective of its inability to generate pleasure for them or be desired by

⁵ Similar experience can give different amounts of pleasure for different persons. But simply put, satisfaction from fulfillment of desire can be more comparable among different persons, no matter how different their desires are.

⁶ Consider the case of a smoker who desires smoking and inhaling smoke of cigarette induces pleasure for them. But a complete absence of smoke-free air will diminish their health and life.

them. As such list theories do not take into account individual's reasoning towards the list, they are often considered elitist in nature. But if well-being remains at the heart of developmental policies, objective list theories are a must consideration.

Well-being in economics

OECD framework for well-being indicators define three pillars for measuring well-being, namely material living conditions i.e. economic well-being, quality of life i.e. non-monetary attributes of life having intrinsic value, and sustainability of socioeconomic and natural systems (OECD, 2013). Hence it identifies economic well-being in traditional sense as set of material indicators. The underlying philosophy of economic well-being in this sense (as well as overall well-being) is therefore definitely an objective list theory. But if we go back to the foundation of welfare economics, the concept of utility is based on the theory of hedonism and desire theory of well-being. Though Bentham's principle of utility relied on hedonism, later it was desire theory which helped shaping the idea of preference (desire) revealed by the choices of an individual. It was also possible to rank preferences and the associated material choices, and hence measuring the levels of satisfaction associated with those preferences (utility levels) through the valuation of the material choices using monetary standards (Crisp, 2021).

The relationship between well-being and development has not been straightforward. For a long time economic well-being was evaluated using solely money-based indicators and therefore research on human development was driven by GDP and growth. The first time a significant rift between well-being and material money-based indicators came in popular discourse in early 1970s with the influential work of Richard Easterlin (Easterlin, 1974), known as 'Easterlin paradox', which challenged the money-based utility measures dominating conventional economic theories and policies so far. This was the post-WW2 era where world was going through major sociopolitical changes and concerns about environment was also rising. In 1980s, Amartya Sen and Martha Nussbaum's work on 'capability approach' caused a paradigm shift in the economic discourse of development and well-being. Capability approach proposes some crucial stages between resources available to a person and the utility they can derive from those resources, namely 'capability' and 'functionings'. Functionings refers to one's ability to put the available resource to their utilization i.e. a set of choices. And capability refers to a person's ability to actually choosing from that available set of functionings i.e.

freedom to function. So, according to this approach available resource can derive utility only after passing through these two stages- the possessor is able of using that resource, and they are capable or have freedom to exercise their ability⁷. This approach paved the way of Human Development Index (HDI) in 1990s (Sen, 1999). HDI is the first international attempt to evaluate well-being with an expanded set of indicators that include non-monetary measures and it would be a precursor of many similar and wider-ranged multidimensional measures accounting for development, deprivation and well-being. Bhutan's measure of Gross National Happiness (GNH) along with initiatives like Gallup's happiness survey in USA in the late 2000s once again stirred up the question about relevance of subjective measures of well-being. Such initiatives gradually made the way for subjective measures of well-being to be incorporated in the growing discourse of multidimensional well-being and interdisciplinary approach towards measuring them. OECD framework for well-being indicators thus adapted a more interdisciplinary and holistic concept of well-being and recognized many components outside the traditional indicators of economic well-being, like subjective well-being, work-life balance, personal security, civic engagement and governance. It also recognized the complex socioeconomic systems and their ability to influence sustainable well-being (OECD, 2013).

Question arises, do subjective evaluations of well-being always coincide with the objective evaluations of well-being? And if they do not go same direction, how do we perceive development? Blanchflower and Oswald (2005) found out that despite scoring high on HDI, Australia performed poorly in many happiness indicators. Contrary to their findings, Hall and Helliwell (2014) had shown that higher values of HDI do coincide with higher life evaluation. Theoretically, even though people tend to value certain material and social indicators of development in general, there is no certainty that their valuation will coincide with development policymakers. Sen, therefore, argued against using

⁷ For example, a dalit (schedule caste) village woman owns a bicycle which can take her to her workplace in one hour. So the bicycle can derive her utility in form of income flow. Now in order to actually achieve this utility, at first stage, she must know how to ride a bicycle and she must be physically able enough to ride a bicycle for one hour i.e. her set of functionings must include knowledge of cycling and stamina for cycling long hours. At second stage, she must have the freedom to exercise the choice of cycling to her workplace i.e. she is not restricted by her family-heads from leaving home for work as a woman, and she is not barred from using the only road that passes through the adjacent village of caste Hindus because of her caste location. So her utility from her bicycle will depend on personal attributes like knowledge of cycling, material attributes like nutrition and health and social attributes like existence of gender discrimination and caste discrimination.

solely subjective evaluation without the support of any neutral observation (Wells, 2012). Nonetheless, evaluation of people who are subject to the development policies is important because there is a continuous gap between the two evaluations and people's evaluation of well-being keep declining while the development indicators improve, that cannot be an ethically desirable development for it indicates towards some major but invisible deficiency which needs to be understood and addressed.

Constituents and determinants of well-being

Since well-being is multidimensional in nature and the dimensions of well-being are often associated with each other, it can be confusing to determine what is the constituent of well-being and what is the determinant of well-being. Ideally constituents should be an end in itself, and determinants should be means to achieve that end. Taking the example of clean air again, if we go by the objective list theories of well-being, availability of clean air (or good health, generally speaking) will be a constituent of well-being. But if we consider the desire theory of well-being and say availability of clean air (or good health) is desirable, then it becomes the determinant of well-being as it is a mean to 'satisfaction from desire-fulfillment', the end. Hence, a same construct or a same indicator can become both constituent and determinant under different theoretical frameworks. According to Dasgupta (2001), if carefully measured, both change in the set of constituents and change in the set of determinants can reflect in the overall well-being. Therefore well-being can be measured by aggregating both the sets. The OECD framework of well-being indicators of 2011 has conceptualized individual well-being with a set of indicators divided in two categories-material living conditions and quality of life. Where material indicators include income and wealth, quality of life indicators include health status and subjective well-being (OECD, 2013). While all the indicators related to material living condition and some of the quality of life indicators are generally considered to be from the set of determinants, indicators like subjective well-being are considered to be the constituents of well-being. Moreover, indicators like income and health status can enhance each other while both of them can enhance subjective well-being. Hence, the operational multidimensional measures of well-being often do not strictly follow such theoretical structures and exhibit a mixed set of dimensions according to the research or policy requirement.

Subjective well-being and Happiness Economics

The concept of subjective evaluations of well-being in economics is essentially associated with happiness economics. Happiness economics is an interdisciplinary approach under welfare economics which tries to understand and measure human welfare through happiness indicators (subjective evaluations of well-being), discovering the ways through which one achieves it and ways through which it influences their functioning.⁸ The discipline garnered attention with the work of Bernard Van Praag (1971) of Leyden School who developed a welfare function of income and estimated subjective valuation of money across many European countries using his Income Evaluation Questionnaire, and the work of Richard Easterlin (1974) who empirically found out that economic growth does not translate into higher degree of happiness. This interdisciplinary approach generally uses happiness indicators i.e. different types of self-reported well-being to measure well-being. Thus the well-being evaluation under this discipline is always subjective in nature. Subjective well-being (not to be confused with the phrase ‘subjective well-being’ which is often used to indicate subjective measures of well-being) is a popular self-reported well-being indicator in this context. Essentially a psychological construct, developed by Ed Diener (1984), subjective well-being is a general three-component indicator comprised of happiness, affect balance and life satisfaction. It tells about an individual’s perceptions and judgment about the well-being they experiences from living own life. Happiness is the short term evaluation of one’s feeling at that particular moment. Affect balance deals with the positive and negative feelings or emotional experiences around that particular moment (for instance, ‘in the past 24 hours’), also called net elation or net happiness. And life satisfaction represents the cognitive part of subjective evaluation which deals with life evaluation for long run, judgments based on past experiences, reasoning and learning (Diener, 1984; Diener et al., 1999). This construct is widely used in happiness economics since it can be measured with standardized questionnaires.

⁸ Being another discipline in between Economics and psychology, its primary difference with behavioral economics and its sub-disciplines is that behavioral economics deals with the psychology behind every kind of economic behaviors, even within non-human animals while happiness economics essentially deals with questions related to human welfare, thus focusing over a more specific area of economics.

Chapter 3: Overview of Literature

The purpose of this study is to investigate well-being of informal workers using non-monetary dimensions of well-being. Informal workers' well-being is subject to a complex network of socioeconomic systems which cannot always be separated. Therefore the most obvious way of accounting for well-being from non-monetary perspective is to use the concept of subjective well-being i.e. self-reported evaluations of well-being. By definition, subjective well-being is a constituent of individual well-being. Studies evaluating well-being of informal workers using this concept mainly focused on the effect of informality on well-being when compared with well-being formal workers (Rojas, 2013; Jütting et al., 2007). Empirically the effect of informality on well-being is not unanimous. Since our study perceives informal economy as an integral part of modern economy and focuses only on informal workers, our evaluation of subjective well-being is without any direct comparison to formal workers.

Now for the complex network of systems, we can broadly divide them into work related and non-work related strands since our concern is informal workers and therefore 'work' is an integral part of their existence. To account for the work related well-being we have considered the concept of decent work. For the rest, we have considered the concept of social capital. Although these two concepts are far from being exhaustive in capturing every aspect of individual well-being, together they cover a significant portion. Both decent work and social capital are necessary for sustainable well-being (OECD, 2013; Ariza-Montes et. al, 2019).

Decent work is included in the 2030 sustainable development goals (SDGs) and considered a 'fundamental dimension of the quality of life' (Anker et. al, 2002). To understand the contribution of decent work towards well-being better, one needs to consider psychology of working theory (PWT). PWT is a psychological model focused on decent work experience and theorizes decent work as a central requirement for human dignity and well-being (Di Fabio and Kenny, 2016). It aims to understand what purpose work serves in our life. In David Blustein's word, "Working is a central aspect of life, providing a source of structure, a means of survival, connection to others, and optimally a means of self-determination" (Blustein, 2013). Blustein has been working extensively on the importance and relevance of psychological component of decent work. ILO's decent work agenda from 2000s was developed to promote inclusive and fair globalization where the benefit of globalization reaches every section of workers through four main channels- employment, social security, workers' right and social dialogue. But apart from being too diverse and open-ended to be

implemented effectively, another crucial criticism of decent work has been its heavy dependence of macro-level statistical data. This kind of analysis essentially misses people's experience from work; experiences which are subject to inequalities and discriminations and directly affect their psychological health (Blustein et al., 2016) . Understanding the psychological aspect of decent work therefore helps translating decent work into decent life and addresses some of the critiques of decent work.

The concept of social capital is even broader. Generally 'social capital' is understood to be the intangible elements embedded in social networks, shared norms and trust within society that benefit individual(s) in various ways. Different social capital indicators are found to positively influence both physical and mental health (Kouvonen et. al., 2006; McPherson et al, 2013; Browne-Young et al, 2013; Forsman et al, 2013). Social capital indicators are found to enhance economic well-being and labour market outcome (Hellerstein & Neumark, 2020) . This is particularly relevant for the daily survivalist informal economic activities where social capital is utilized along with human capital to gain financial capital (Busse, 2001). Social capital indicators impact on formal-informal linkage (Koto, 2017) and business performance of informal enterprises (Akintimehin et al. 2019). Lastly, social capital indicators are found to positively influence different subjective indicators of well-being (Willis-Herrera et al. 2011; Matsushima and Matsunaga, 2015; Portela, Neira, and del Mar Salinas-Jiménez, 2013; Aminzadeh et. al, 2013). Social capital can create resilience to deal with crisis and conflicts and help reduce their negative effect on well-being (Helliwell, Huang, & Wang, 2014; Browne-Yung, Ziersch, & Baum, 2013; Aminzadeh et. al, 2013). Therefore many scholars have tried to explain Easterlin paradox and similar puzzles through this mediating effect of social capital (Pena-López, Sánchez-Santos, & Membiela-Pollán, 2017; Addae, 2020). Although, the influence of social capital is not one directional. For instance, Browne-Young et al. (2013) found that while social capital enhances health and well-being through reinforcing cultural identity and access to resource for aboriginal Australians, it also reflects the historical disadvantage through racism and resulted economic, social and cultural position. Appau et. al. (2020) showed that social capital inequality can reduce life satisfaction among Chinese elderlies.

Chapter 4: Research Objectives

As the previous discussion suggests, while subjective well-being is by definition constituent of well-being, decent work and social capital come from the determinant side of well-being. Hence, we have attempted to evaluate well-being following all three concepts, and we have also tried to see how these constituents and determinants of well-being are interrelated, if at all.

The empirical exercise in this study is carried out with individual-level primary survey data. The survey was carried out at individual level in Hooghly district of West Bengal, India. Endowed with fertile land favoring agriculture and also having a history of industrialization, this district has a presence of informal labour date long back due to the dual presence of traditional and modern sectors. The main informal activities prevailing in the survey area were identified by expert consultation and using available secondary data. Using quota sampling method based on the identified activities, 550 responders were interviewed and a total 542 final responders belonging from rural and urban areas of the district were selected for conducting the empirical analysis.

The broad research questions addressed in this thesis are as followed:

- i. Enquiring the state of overall well-being of the informal workers in terms of subjective well-being.
- ii. Enquiring the quality of work of the informal workers in terms of decent work condition.
- iii. Enquiring the state of social capital of the informal workers.

The empirical exercise required to find answers of those above mentioned questions can be simplified into mainly four tasks:

- a) Constructing individual-level subjective well-being index (SWBI),
- b) Constructing individual-level decent work index (DWI)
- c) Constructing individual-level social capital index (SCI)
- d) Investigating how these indices interact with each other and with the conventional objective indicators of well-being using econometric methods.

Under this broad framework we have focused particularly on the income or money-based indicators as the conventional objective indicators. Chapter 5 addresses the first question in two parts. In the first part we attempt to construct individual-level well-being indices using the concept of subjective well-being. Then in the second part we investigate how the constructed indices vary with responder's income and other demographic characteristics. Chapter 6 addresses the second question by constructing individual-level decent work indices using the seven security-based measure of decent work from People's Security Survey by ILO in early 2000s, and comparing their contribution in the overall decent work condition. Additionally we try to see how education and other supply side factors affect the decent work condition of informal workers. Chapter 7 addresses the third question by constructing individual-level social capital indices using the structural-relational-cognitive construct of social capital introduced by Nahapiet and Ghoshal (1998). Further, we attempt to test the hypothesis that social capital positively influences income and contribute in poverty alleviation. Additionally we have tried to investigate how these different aspects of life and well-being interact with each other. This analysis has been carried out in chapter 8. We have used descriptive statistics to find out the pattern in which these three indices correlate with each other, if any. Then we have revisited the models of chapter 5 to see how good quality of work and social capital contribute to the overall state of well-being, if at all.

Chapter 5: Methodology

5.1. Data collection

5.1.1. Survey design

The survey was carried out at individual level in Hooghly district of West Bengal, India. Hooghly is an old settlement at the bank of Ganges. Along with the geographically-favored location for agriculture and allied activities, it has a history of industrialization based on the French and Dutch colonial townships like Chandernagore, Serampore. Hence the coexistence of traditional and modern sectors as well as presence of a huge number of informal labour date long back in this district. Presently it has a total 13 corporation/municipalities and 18 blocks under four sub-divisions. For urban area, Chandernagore Municipal Corporation was randomly chosen from the corporation/municipalities. For rural area, first Dhaniakhali block (18 gram-panchayets) and then Bhandarhati-I and Dasghara-II gram-panchayets from the block were randomly chosen. Due to lack of secondary data at the municipality/block level, the population size of informal workers in the survey areas could not be determined and a complete population enumeration was impossible. Therefore no random sampling technique could be applied for choosing the sample. Number of beneficiaries from different professions registered under government social security and employment schemes for informal workers (such as SASPFUW, social security scheme for transport workers, NREGS) were available from the local government bodies. But the data was inconsistent across rural and urban areas. Moreover, coverage of such schemes is far from being exhaustive i.e. the actual size of informal workers' population hugely supersedes total number of beneficiaries. Under these methodological constraints quota sampling technique was applied for an exogenously decided sample size. For this sampling method, the sample is divided into quotas or smaller segments based on proportions of a chosen parameter. In this case, the chosen parameter is the responder's profession or the particular informal activity they are engaged in. Ideally, proportions for each informal activity in the sample should match the proportions of those informal activities in the population. After the size of each quota is decided, the responders are randomly chosen until the desired sub-sample size is attended.⁹ To decide for the quotas (proportions for each informal activity in the sample) an extensive pilot survey was performed before final survey. Local government bodies such as local labour office, gram-panchayet as well as NGOs active in the survey areas were consulted during the pilot survey to understand the basic structure of

⁹ For instance, if the sample size is 100 and the quota for a particular informal activity (say, street-vending) is 5%, street-vendors of the survey area are randomly interviewed until we have full interviews of five street-vendors.

informal worker population of those areas. 22 significant informal activities were identified and the quotas for each survey area were determined based on the available beneficiary data and information from pilot survey regarding the rough structure of local informal workers' populations.

The criteria followed regarding selection of responders are:

- Only one responder has been surveyed from any household
- Household of the responder must not have any formal worker and must be supported by informal economic activities.
- Responder must be at least a regular and substantial contributor to household expenditures

A total 550 informal workers were surveyed between September, 2016-March, 2017, in which 350 workers were urban and rest was rural. A final 542 observations were used for analysis after cleaning of the data. Table 2 presents a distribution of the sample across employment status categories and national occupation classifications of economic activities (Ministry of Labour and Employment, 2015).

Table 2: Distribution of informal workers across economic activities and employment status

NOC division	Self-employed	Wage-earners	Casual labour	Overall
5 (Service workers and shops & market sales workers)	4%	36%	2%	14%
6 (Skilled agricultural and fishery workers)	15%	0%	18%	11%
7 (Craft and related trades workers)	16%	19%	22%	19%
8 (Plants and machine operators and assemblers)	24%	14%	7%	16%
9 (Elementary occupations)	42%	30%	50%	41%
Total	100%	100%	100%	100%

- Values are in percentage of total responders in the group

Source: Calculated by authors from primary survey

5.1.2. Description of the sample

Majority of the responders are male (74.4 %), Hindu (68.5 %) and general caste (60.3 %). The sample has only two religious groups-Hindu and Muslim, and only three caste groups- general, schedule cast (SC) and other backward classes (OBC). The responders are aged between 16 years to 76 years, median age being 38 years and average age being 39 years approximately. At the time of survey, 84.65 % responders were married and living with their spouse and 47.23 % responders had children. Approximately 35 % of the responders never have gone to school. While the percentage is 25 % for rural responders, for the urban counterpart the number rises to 40.5 %. Table 3 presents the distribution of education level across gender and residing areas.

Table 3: Distribution of education level across gender and residing areas

Education level	Rural			Urban			Sample average
	Male	Female	total	male	female	total	
Nil	20.9%	39.5%	25.0%	37.2%	49.0%	40.5%	34.9%
Primary (1-4 years of schooling)	6.5%	4.7%	6.1%	13.6%	15.6%	14.2%	11.3%
Secondary (5-8 years of schooling)	36.6%	32.6%	35.7%	31.6%	18.8%	28.0%	30.8%
Secondary (9-10 years of schooling)	34.6%	20.9%	31.6%	11.2%	11.5%	11.3%	18.6%
More than 10 years of schooling	1.3%	2.3%	1.5%	6.4%	5.2%	6.1%	4.4%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: calculated by authors from primary survey

Categorization of informal activities

The definitions of 68th round National Sample Survey(NSS) of India has been used for the categorization. The 22 main occupations have been categorize under three broad groups- self-employed, regular wage-earner and casual labour using ‘usual principal activity status’ approach i.e. what has been the main economic activity of the responder in last 365 days or one year (NSSO, 2015). Self-employed are defined as people engaged in own farm or non-farm activities independently on ‘own-account’ or with other few partners, also ‘self-employed in household enterprises’. Self-employed is mainly characterized by the professional autonomy i.e. their ability to independently

decide everything about the production/operation. Regular wage-earners are people who work in others' farm/non-farm enterprises full-time or part-time and get paid in a regular basis and not on the basis of any short-term periodic contract (i.e. daily, monthly). Lastly, casual labours are those who work in others' farm/non-farm enterprises under short-term periodic contracts. Following this classification, self-employed, regular wage-earner and casual labour¹⁰ consist 36.53 %, 33.39 % and 30.07 % of the total sample respectively.

Gender and the work-categories

Overall majority of male responders are engaged as self-employed and majority of female responders are engaged as regular wage-earners. The pattern is same for urban area. But in rural area majority of men are employed as casual labour and the percentage is high for women workers as well. Large existence of agricultural labours can be a possible reason for such working pattern. Table 4 presents the distribution of work-categories across gender and residing areas.

Table 4: Distribution of work-categories across gender and residing areas

Work-category	Rural		Urban		Total	
	Male	Female	male	female	Male	Female
Self-employed	40.52%	11.63%	45.20%	18.75%	43.42%	16.55%
wage-earner	14.38%	48.84%	25.60%	77.08%	21.34%	68.35%
Casual labour	45.10%	39.53%	29.20%	4.17%	35.24%	15.11%
Total	100%	100%	100%	100%	100%	100%

Source: calculated by authors from primary survey

Education and the work-categories

Responders with zero years of schooling are primarily employed as regular wage-earner, followed by self-employed. The pattern is similar for responders with 1 to 4 years of schooling as well. For responders with 5 to 10 years of schooling, majority work as self-employed followed by regular wage-earners. For responders with schooling of more than 10 years, the pattern again becomes similar as the first two groups with a lower percentage for casual labour (20.8 %). Table 5 presents distribution of work-categories across education levels.

¹⁰ For this study, piece-rate workers or workers who get paid according to the amount of work they deliver on regular/irregular interval are also clubbed under 'casual labour'.

Table 5: Distribution of work-categories across education levels

Work-category	Education level				
	Nil (Zero years of schooling)	Primary (1 to 4 years of schooling)	Secondary (5 to 8 years of schooling)	Secondary (9 to 10 years of schooling)	More than 10 years of schooling
Self-employed	33.3%	37.7%	38.9%	37.6%	37.5%
Wage-earner	36.5%	37.7%	29.3%	29.7%	41.7%
casual labour	30.2%	24.6%	31.7%	32.7%	20.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Source: calculated by authors from primary survey

5.2. Construction of index

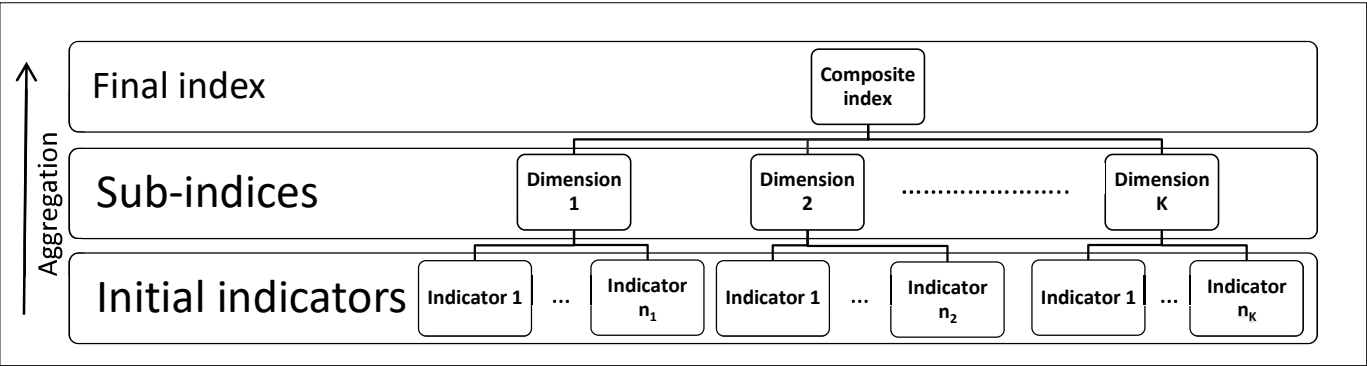
Responders were interviewed face-to-face mainly in Bengali language (with occasional usage of Hindi where needed). The questionnaire covered information on their demographic profile, psychological well-being, life-satisfaction, decent work conditions and social capital indicators. The initial questions were selected through rigorous review of existing literature and guided by internationally established questionnaires (this part is discussed in more details in the respective chapters separately). Two pilot surveys were conducted and they revealed a number of communication gaps as our initial questionnaire overly relied on international formats and lacked regional/local relevance. Final questionnaire was designed by restructuring and re-sequencing initial questionnaires Since the survey was carried out using limited resource within a short time-frame, the questions were kept as minimal as possible.

Construction of index in this study follows a simple general scheme. First the broad dimensions and relevant indicators under those dimensions are chosen based on conceptual framework guided by

literature. Post-survey tests of reliability for subjective well-being and social capital indicators¹¹ revealed moderate to low values of Chronbach's alpha. This can be result of our attempt to cover multiple facets of well-being and not having a large number of items under every single dimension. But since this is a basic stage of research and the purpose of these indices is to get a preliminary insight into the multidimensional well-being of informal workers and not developing questionnaires or test-batteries for policy purpose, we did not opt for increasing reliability. Because going for higher reliability would have required dropping multiple items which do not gel well with indicators closely connecting to one underlying dimension and thus losing information i.e. content validity. Therefore in such cases we relied more on existing theories to decide which indicators to retain ultimately for indexing. The process of index construction generally has two steps: 1) aggregate the indicator scores under their respective dimensions to get the sub-indices for each responder and 2) aggregate the sub-indices to get the composite index for each responder. The method of aggregation best suited for our problem is weighted geometric mean. Where geometric mean is not viable due to the possibility of some indicators taking zero value, weighted arithmetic mean is used followed by summation of the sub-indices. In every step of aggregation equal weight has been given to the dimensions (and sub-dimensions) rather than all the individual indicators. This has been done under a simplified assumption that all the dimensions as well as all the indicators under a single dimension have equal importance. Therefore under weighted arithmetic mean we have partial substitutability across all the indicators in general but perfect substitutability among the dimensions and among the indicators under one dimension. Figure 1 presents the general scheme of calculating index. In figure 1, each dimension gets the weight $1/K$ and each indicator under k -th dimension gets the weight $(1/Kn_k)$.

¹¹ The decent work indicators are mostly objective in nature whereas indicators of well-being and social capital are often subjective/psychometric; hence test for reliability has not been given importance in case of decent work index.

Figure 1: General scheme of construction of index



Source: Author's illustration

Chapter 6: Subjective Well-Being of the Informal Workers

6.1. Introduction

In this chapter we have used subjective well-being approach and tried to investigate well-being of informal workers from their individual perceptions. The concept of subjective well-being helps us to understand the state of well-being without focusing on any particular sphere of life. Thus subjective well-being assessment of informal workers provides us a helpful supplementary insights on the overall state of self-reported well-being of the informal workers. This chapter addresses two main problems- evaluation of subjective well-being of informal workers and discovering the major factors that influences their state of subjective well-being . The chapter is roughly divided into two parts. In the first part, subjective well-being of informal workers is evaluated by constructing an individual-specific subjective well-being index and in the second part, the short-run relationship of subjective well-being with income and other relevant demographic factors has been investigated. Section 2 provides a brief review of literature including explanations of the concepts used in this study; Section 3 gives a description of methodological issues including choice of indicators, and construction of the proposed index, Section 4 presents data analysis, Section 5 presents discussion of results and Section 6 concludes.

6.2. Literature review

6.2.1. Well-being of the informal workers

Informal economy started gaining recognition in the mainstream economics as a distinct economic system in underdeveloped and developing country rather than a temporary economic condition only around 1970-1980s (Chen, 2012). Much research has been done and still going on to develop the framework of identifying the informal economy and its activities (Joshi, 1980; Sastry, 2009). Because, as organized sectors develop and expand, the associated informal activities also keep on modifying and expanding themselves. The existing literature on welfare of informal workers is mainly concentrated on studies with respect to specific occupations (Blaauw et al., 2013; Markussen et al., 2018) as well as specific problems like financial inclusion and social security (Hu and Stewart, 2009), working conditions (Kantor et al., 2006), skill and productivity (Sanghi and Sensarma, 2014) etc. Studies on informal workers using the concept of subjective well-being have mainly focused on analyzing the effect of informality on well-being through comparison between formal and informal workers (Rojas, 2013; Jütting et al., 2007; Temkin, 2016; Cassar, 2010). Outcomes of these studies are

not unanimous and often suggest a parallel strong existence of informal economy with its mixed effects on well-being. Our study acknowledges informal economy as an integral and substantial part of economy for developing and underdeveloped countries with its own advantages and disadvantages, and attempts to evaluate and analyse subjective well-being of informal workers without any direct comparison with formal workers.

6.2.2. Measuring subjective well-being and its relevance in economic discourse

Though the three component construct of happiness, affect balance and life satisfaction at global and domain-specific levels is a widely accepted structure of measuring subjective well-being, there has been no unanimous theory on which domains of life should be considered while evaluating subjective well-being. Chapple (2010) provided a detailed description of various life-domains that have been used to measure the overall individual subjective well-being. Samman (2007) proposed a set of internationally comparable questions to measure psychological and subjective well-being which covers four aspects of well-being: meaning in life, basic psychological needs, domain-specific life-satisfaction and overall life-satisfaction. To understand the relevance of subjective well-being in economic measurement of welfare, one must understand its relation with ‘utility’ which has been synonymously used with welfare in economic analysis. Conceptualized and developed by theorists like D. Bernouilli (1954) and Jeremy Bentham (1789), utility is an abstract idea of satisfaction that is experienced from any action taken by an individual, and also something which the individual maximizes with every action taken. Self-reported subjective well-being measures are argued to be direct proxy of utility (Stutzer and Frey, 2004) while some researchers claimed them to share a more complex relation than that (Kimball and Willis, 2006). But there is no denying that utility shares conceptual similarity with subjective well-being. Traditionally utility has been indirectly measured by utility functions made of various proxy material indicators, essentially measurable. It was not until the revelation of Easterlin paradox (Easterlin, 1974) that the increasing gap between subjective well-being and the proxy material measures of utility was pointed out and the importance of introducing subjective welfare indicators (complementing the existing material measures) to capture the original idea of utility gathered attention. Using two decades’ USA data from post-WWII era, R. A. Easterlin (1974) showed that GDP growth of the country had shown no significant positive relation with the happiness of citizens. This posed a very important question on the reliability of money or income as the measure of well-being-famously known as Easterlin paradox. The paradox implies that while

richer people are generally happier than poorer people, in long run (10 years or more) increase in income level doesn't reflect as increase in happiness after a point. The paradox is still an open empirical question.

There has been an alternative way of considering subjective well-being as a class of subjective social indicators which complement traditional money-based measures like GDP and which doesn't get captured by other objective complementary social indicators like HDI, MPI, gender inequality index. For that, rather than being a single measure of well-being, subjective well-being is seen as an umbrella term for measures like perceived quality of life, life satisfaction, psychological well-being (Fischer, 2009). In this paper this alternative approach has been considered and a composite index has been constructed combining life-satisfaction measures and psychological well-being indicators. Though some studies used larger sets of subjective well-being indicators (Rojas, 2013; Bhuiyan and Ivlevs, 2018), no study has so far used a single composite subjective well-being index to assess the well-being of informal workers. While separate indicators provide deeper insight, a single composite index is useful to give a snapshot of the problem and easier to comprehend.

6.3. Methodology

6.3.1. Selection of indicators

We have broadly used Samman's framework (2007) to choose the initial indicators. For the psychological well-being or positive functioning part, Samman used Steger's meaning of life (Steger et al.2006) and Ryan and Deci's Self-Determination Theory (Ryan and Deci 2000). For the life satisfaction part, she used overall and domain specific life satisfaction, and happiness. Self-determination theory consists of three items-autonomy, relatedness and competence. The Likert scale (Likert, 1932) used in the original questionnaire presents a set of opinion statements and asks the responder how much they agree on them or how much it is appropriate for them. However, this pattern was discarded after the pilot survey due to inconsistent responses. Instead, responders were asked one structured question with categorical answer from each of the three items. Questions on autonomy and relatedness were dropped due to inconsistent answers. For 'presence of meaning in life', the proxy question asked is 'what do you understand by 'well-being' in life?'. Well-being, utility, or happiness is the central themes and maximum well-being is the ultimate aim of every human action (rationality) under the regime of happiness economics and welfare economics. Therefore

‘having an understanding of well-being’ has been used as a proxy for ‘having a sense of meaning in life’. For domain specific life satisfaction, domains have been chosen at personal/family level and at community level. Domains are selected from the core group questions of Gallup World Poll 2006 on happiness, according to the relevance for target group. Table 6 presents the descriptions of variables chosen for this study:

Table 6: Choice of indicators for constructing subjective well-being index

Broad category	Variable name	Description	Measurement
Domain specific satisfaction – personal and family level	Own financial condition	Perception about material well-being: satisfaction with personal financial (economic) condition.	Discrete ordinal variable, measured over a four-point Cantril ladder ¹²
	Own health	Perception about material well-being: satisfaction with present state of personal health.	
	Peaceful family environment	Perception about nonmaterial well-being: satisfaction with present family environment.	
	Own housing condition	Perception about material well-being satisfaction with their present housing condition.	
	Own social status	Perception about nonmaterial well-being satisfaction with their current social status.	
Life satisfaction Domain specific satisfaction- community level	State of pollution in locality	Perception about locality –satisfaction with quality of local environment	Discrete ordinal variable, measured over a four-point Cantril ladder
	State of healthcare system in locality	Perception about local infrastructure(public goods and service)-satisfaction with overall local healthcare system (considering cost of healthcare, availability of medicine, healthcare facilities)	
	State of road and transport system in locality	Perception about local infrastructure(public goods and service)-satisfaction with overall local connectivity related to transport	
	Condition of water supply and electricity in locality	Perception about availability of basic amenities(public goods and service)-satisfaction with condition of water and electricity supply	
	State of education system in locality	Perception about local infrastructure(public goods and service)-satisfaction with overall education system (considering school availability, infrastructure and academic performance)	
	Security and safety condition in locality	Perception about locality-satisfaction with Physical safety and security condition of locality	
	Condition of business and economy in locality	Perception about locality-satisfaction with local economic condition	

¹²Cantril ladder (Cantril 1965) kind of survey question asks the responder to rank their opinion in between potentially a worst state of life and a best state of life i.e. over a ladder of worst to best possibilities;

Overall satisfaction	Overall life satisfaction ¹³	Perception of the responder about how satisfied they are with their present life as a whole.	Discrete ordinal variable measured over a four-point scale
Psychological well-being	Sense of competence	Perception about own competence or feeling competent	Discrete ordinal variable, measured over a four-point scale
	Presence of a meaning in life	A subjective measure of how clear or objective the responder is about their wish and aims in life.	Discrete ordinal variable, measured over a three-point scale ¹⁴

Source: Based on Samman (2007) and Gallup Poll (2006)

6.3.2. Construction of an individual subjective well-being index

One important feature of the well-being indicators considered here is that each indicator score is a rank variable. Where life satisfaction indicator scores rank different life-situations across a four-point Cantril ladder, the psychological well-being indicator scores are simply ordinal variables ranking achievements in the respective well-being domains. To combine these information into indices, geometric mean has been applied. Geometric mean penalizes lower ranks and rewards higher rank, providing a balanced view of the overall position of an individual (Wohlrabe and Friedrich, 2016). As seen in Table 1, our theoretical framework identifies two broad dimensions of subjective well-being, psychological well-being (PWB) and life satisfaction (LS). To get a better idea of the state of well-being, first PWB index and LS index are calculated separately by taking geometric mean of the indicator scores under each broad dimension. The dimension of life satisfaction is comprises of three sub-dimensions with 5, 7 and 1 indicators respectively. Therefore equal weights are given to the sub-dimensions rather than all the 13 indicators. Hence the LS index takes the form of: $LS = ((x_1 \dots x_5)^{1/5} * (x_6 \dots x_{12})^{1/7} * x_{13})^{1/3}$ where x_i is an indicator score under the dimension of life satisfaction. The final subjective well-being index (SWB) is calculated by taking the geometric mean of the PWB index and LS index. Equal weights are assumed while combining the two dimensions to construct the final index.

¹³Overall life satisfaction is not aggregation of the domain-specific satisfactions, for it also captures the part of life unexplained by the twelve chosen life-domains.

¹⁴ The responders were asked what they understand by 'well-being' in life. Three major themes emerged from the answers which are ordered with respect to their objectivity; code 3- achievement in one or more specific aspect of life, code 2- 'I am good as I am now' implying a abstract idea of wellness, code 1- no idea.

6.4. Data analysis

6.4.1. Overview of the indices

Table 7 presents the summary statistics of the composite SWB index across the work-categories and residing area. Rural mean SWB score is higher than urban mean for every work-category. The distribution of SWB score is negatively skewed for every group and the skewness is lowest for wage-earners.

Table 7: Summary statistics of SWB scores across work-categories and residing area

	Self-employed			Wage-earner			Casual labour			Overall
	Urban	rural	total	Urban	rural	total	Urban	rural	total	
Maximum	3.38	3.38	3.38	3.47	3.35	3.47	3.3	3.38	3.38	3.47
Minimum	1.48	2.53	1.48	1.85	2.05	1.85	1.63	2.05	1.63	1.48
Mean	2.83	3.05	2.9	2.82	2.97	2.85	2.77	2.94	2.86	2.88
Coefficient of variation	12.72%	5.57%	11.03%	12.77%	8.42%	11.93%	11.55%	9.86%	11.19%	11.46%
Skewness	-1.14	-0.59	-1.43	-0.77	-1.19	-0.91	-0.91	-1.2	-0.99	-1.11

Source: Calculated by authors

Table 8 represents the distribution of SWB scores across work-categories and residing areas in percentage of total responders belonging to the group. The trend found in summary statistics follows here as well. Percentage of workers having SWB scores above 3.1 (i.e. belonging to the two highest score groups) is higher for rural workers for all three work-categories. The percentage is lowest for wage-earners (53%) and highest for self-employed workers (60.1%).

Table 8: Distribution of SWB scores across work-categories and residing areas

	Self-employed			Wage-earner			Casual labour			Overall
	Urban	rural	total	Urban	rural	total	Urban	rural	total	
Less than 2.9	26.7%	4.5%	19.2%	30.4%	16.3%	27.1%	31.2%	14.0%	22.1%	22.7%
Less than 3.1	25.2%	11.9%	20.7%	21.7%	14.0%	19.9%	29.9%	16.3%	22.7%	21.0%
Less than 3.3	22.9%	31.3%	25.8%	22.5%	30.2%	24.3%	24.7%	34.9%	30.1%	26.6%
3.3 and	25.2%	52.2%	34.3%	25.4%	39.5%	28.7%	14.3%	34.9%	25.2%	29.7%

above

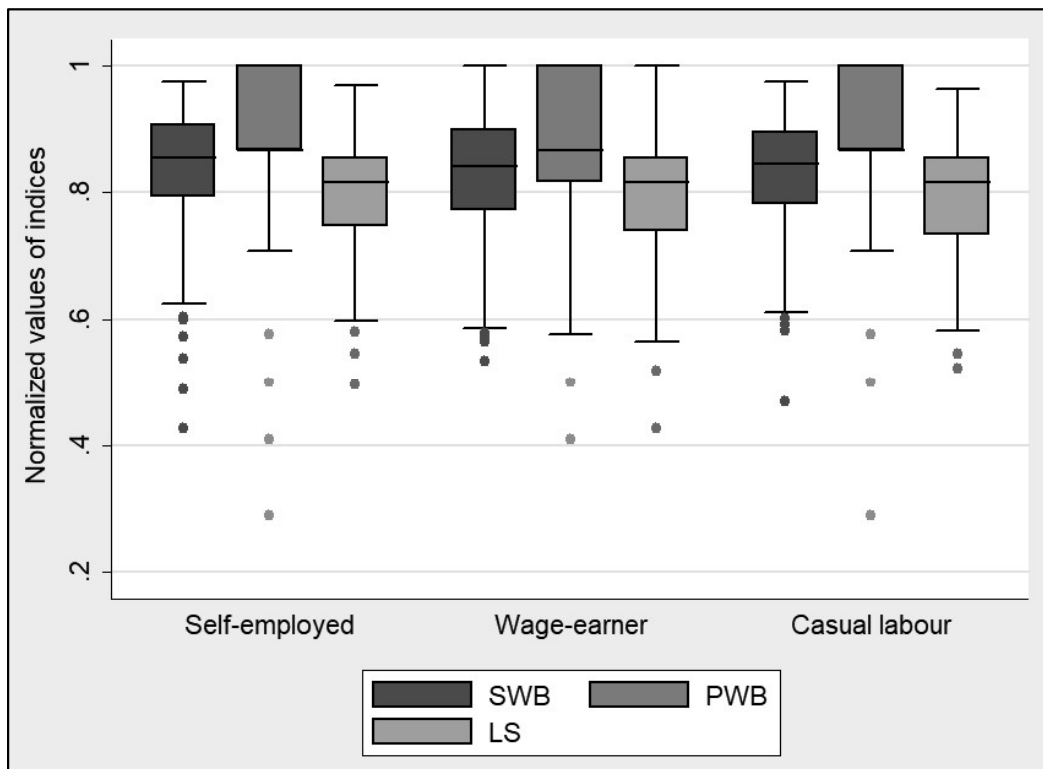
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
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- All values are in percentage of total responders in the respective group

Source: Calculated by author

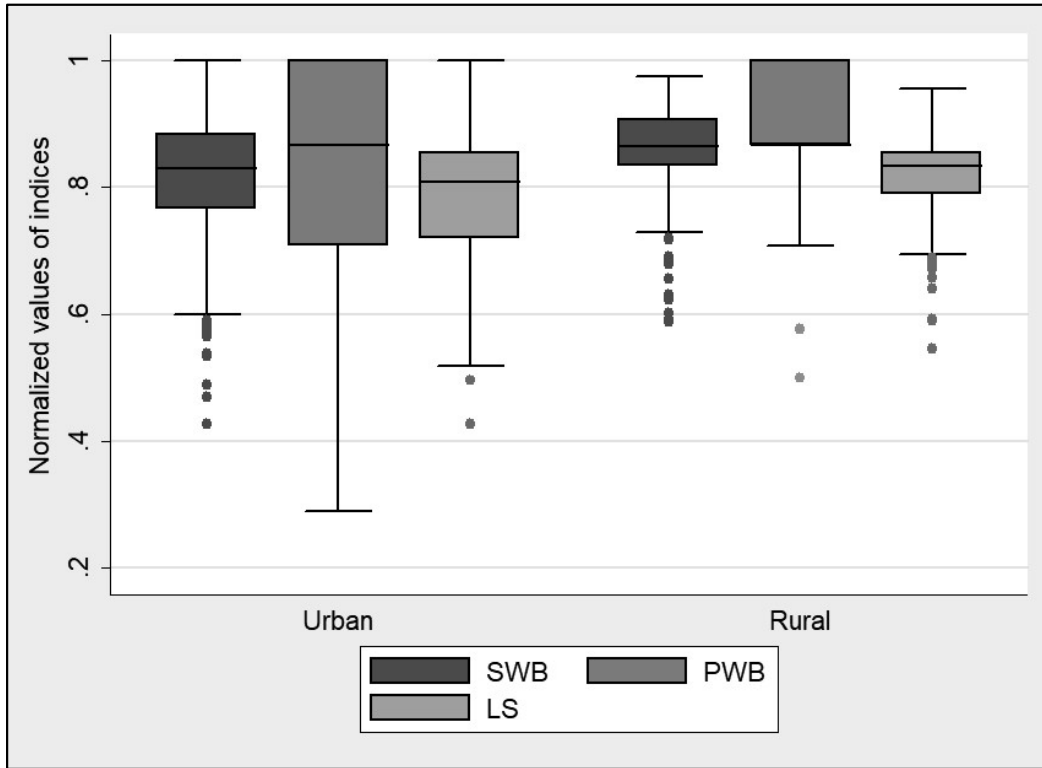
Figure 2 and figure 3 shows the relative distribution of SWB and its two sub-indices PWB and LS across work-categories and residing areas respectively. To make it more comprehensive, all the index values have been normalized with the minimum values set to zero. While there is no visible difference across work-categories, all the three indices show an upward bias in rural group compared to the urban group.

Figure 2: Distribution of SWB, PWB and LS across work-categories



Source: calculated by authors

Figure 3: Distribution of SWB, PWB and LS across residing areas



Source: calculated by authors

6.4.2. Relationship between subjective well-being with income and other relevant factors

To investigate the effect of income on subjective well-being, we here consider two kinds of income: individual monthly income or average monthly income of the respondent and household per-capita monthly income (average monthly household income/adult equivalent family members of the household¹⁵). Apart from income, the following demographic variables are considered as the explanatory variables: rural or urban residential area (Bernini and Tampieri, 2017; Sørensen, 2013), gender (Batz and Tay, 2018), religion, caste (Fontaine and Yamada, 2014), age (Ulloa et al. 2013), education (Witter et al., 1984), marital status (Haring-Hidore et al., 1985), participation in religious

¹⁵ Adult equivalent of a household= (Number of members below 14 years)*0.5 + (Total number of member-number of members below 14 years)

activity (Graham and Crown, 2014), property ownership (Cheng et al., 2016), type of informal activity¹⁶ (Schwarze, 2008; Dawson et al., 2017) and access to social security. To understand how differently the factors influence the overall subjective well-being and its dimensions, SWB (the composite index) as well as the sub-indices (PWB and LS) are considered as dependent variable (I_{WB}). The following main OLS regression model¹⁷ is considered for our investigation (equation 1):

$$I_{WB_i} = a + b_1 \ln(\text{income})_i + c_1(\text{age})_i + c_2(\text{schoolyear})_i + c_3(\text{unmarried})_i + c_4(\text{religious_participation})_i + c_5(\text{asset_holding})_i + c_6(\text{muslim})_i + c_7(\text{SC})_i + c_8(\text{OBC})_i + c_9(\text{female})_i + c_{10}(\text{rural})_i + c_{11}(\text{selfemployed})_i + c_{12}(\text{casual_labour})_i + c_{13}(\text{rural*female})_i + c_{14}(\text{rural*selfemployed})_i + c_{15}(\text{rural*casual_labour})_i + c_{16}(\text{female*selfemployed})_i + c_{17}(\text{female*casual_labour})_i + c_{18}(\text{muslim*SC})_i + c_{19}(\text{muslim*OBC})_i + c_{20}(\text{asset_holding*having_sss})_i + e_i \dots (1)$$

Table 9 describes the explanatory variables used in the regression model.

Table 9: A brief description of demographic variables considered in Equation 1

Quantitative variables							
Factor	Variable	Description	Max	Min	CV	Average	Skewness
Income	ln(income)	Natural log of individual monthly income(Rs.) and household per-capita monthly income(Rs)	25000	300	0.618539	5772.98	1.669051
Age	age	Age of responder (years)	9500	400	0.507807	2595.456	1.594415
Education	schoolyear	Years of schooling of responder (years)	76	16	0.286254	38.76753	0.501324
Income	ln(income)	Natural log of individual monthly income(Rs.) and household per-capita monthly income(Rs)	17	0	0.868543	4.763838	0.201702

¹⁶ Informal works come with varying degrees of job security and income uncertainty which may influence their subjective well-being

¹⁷ Instead of using income directly, a logarithmic transformation of income has been used in the model. It is consistent with the rule of perception suggested by Weber's law which implies that the perceived well-being changes only by proportion of the absolute change in the stimulus (Kahneman and Deaton, 2010). Income is the only explanatory variable in the model which can act as a direct quantitative stimulus for subjective well-being.

Categorical variables			
Category	Variable	Description	Percentage of total population
Marital status	unmarried	1 if unmarried, widow(er) or separated, 0 if married	15.35
Property ownership	asset_holding	Proxy for wealth, binary variable, 1 if responder owns house and/or land, 0 otherwise	90.77
Access to social security	having_sss	1 if responder is registered under any government social security scheme, 0 otherwise	19.2
Participation in religious activity	religious_participation	1 if responder has been directly involved in any personal/community religious function over last one year, 0 otherwise	45.20
Gender	female	1 if responder is female, 0 otherwise	25.65
Residing area	rural	1 if residing in rural area, 0 otherwise	36.16
Type of work (control group: regular wage-earners)	selfemployed	1 if self-employed, 0 otherwise	36.53
	casual_labour	1 if casual labour or piece-rate worker, 0 otherwise	30.07
Religious identity	muslim	1 if responder is Muslim, 0 otherwise	31.55
Caste identity (control group: general)	SC	1 if responder is SC, 0 otherwise	23.43
	OBC	1 if responder is OBC, 0 otherwise	15.88

Source: Calculated from primary survey

Equation 1 is run with both individual monthly income (1A) and household per-capita monthly income (1B). No multicollinearity is detected among the independent variables. Table 10 presents the regression result of this model:

Table 10: Regression results of model 1

	SWB		PWB		LS	
	(1A-Individual income)	(1B-Household percapita income)	(1A-Individual income)	(1B-Household percapita income)	(1A-Individual income)	(1B-Household percapita income)
ln(Individual income)	0.120*** (0.0264)		0.137*** (0.0421)		0.0948*** (0.0264)	
ln(household percapita income)		0.167*** (0.0298)		0.157*** (0.0479)		0.169*** (0.0294)
age	-0.000677	-0.000845	0.00159	0.00116	-0.00269*	-0.00256*

	(0.00142)	(0.00139)	(0.00226)	(0.00223)	(0.00141)	(0.00137)
schoolyear	-0.00290	-0.00184	0.00157	0.00304	-0.00766**	-0.00710**
	(0.00348)	(0.00341)	(0.00554)	(0.00549)	(0.00347)	(0.00338)
female	0.0201	-0.0568	0.0892	-0.00835	-0.0499	-0.101*
	(0.0609)	(0.0547)	(0.0971)	(0.0881)	(0.0608)	(0.0541)
unmarried	-0.0262	-0.0567	-0.00963	-0.0442	-0.0344	-0.0592
	(0.0390)	(0.0382)	(0.0622)	(0.0614)	(0.0389)	(0.0377)
religious_participation	-0.0187	-0.0334	-0.0306	-0.0448	-0.0134	-0.0280
	(0.0367)	(0.0364)	(0.0585)	(0.0586)	(0.0366)	(0.0360)
muslim	-0.0698*	-0.0673*	-0.0868	-0.0831	-0.0522	-0.0512
	(0.0379)	(0.0375)	(0.0604)	(0.0604)	(0.0378)	(0.0371)
SC	-0.0270	-0.00144	-0.0826	-0.0572	0.0218	0.0463
	(0.0386)	(0.0383)	(0.0614)	(0.0616)	(0.0385)	(0.0379)
OBC	0.0246	0.00105	0.0362	0.0148	0.00693	-0.0179
	(0.0506)	(0.0504)	(0.0807)	(0.0811)	(0.0505)	(0.0498)
muslim*SC	0.0168	-0.00102	0.164	0.147	-0.112	-0.130
	(0.0807)	(0.0800)	(0.129)	(0.129)	(0.0805)	(0.0791)
muslim*OBC	-0.0508	-0.0113	-0.105	-0.0662	0.0198	0.0586
	(0.0817)	(0.0811)	(0.130)	(0.130)	(0.0815)	(0.0802)
rural	0.131*	0.147**	0.235**	0.245**	0.0110	0.0330
	(0.0740)	(0.0734)	(0.118)	(0.118)	(0.0738)	(0.0726)
rural*female	-0.0924	-0.0942	-0.115	-0.103	-0.0704	-0.0874
	(0.0836)	(0.0824)	(0.133)	(0.133)	(0.0834)	(0.0814)
rural*selfemployed	0.113	0.107	0.0334	0.0289	0.196**	0.188**
	(0.0804)	(0.0797)	(0.128)	(0.128)	(0.0802)	(0.0788)
rural*casual_labour	0.0279	0.0543	-0.0698	-0.0431	0.135	0.160*
	(0.0835)	(0.0827)	(0.133)	(0.133)	(0.0833)	(0.0818)
asset_holding	0.0957**	0.0946**	0.152**	0.156**	0.0451	0.0388
	(0.0487)	(0.0481)	(0.0775)	(0.0774)	(0.0485)	(0.0476)
asset_holding*having_sss	-0.0273	-0.0449	-0.0326	-0.0501	-0.0158	-0.0327
	(0.0364)	(0.0361)	(0.0580)	(0.0581)	(0.0363)	(0.0357)
selfemployed	-0.0849*	-0.0711	-0.0393	-0.0243	-0.124***	-0.113**
	(0.0476)	(0.0470)	(0.0758)	(0.0757)	(0.0474)	(0.0465)
casual_labour	-0.118**	-0.130**	-0.0645	-0.0743	-0.162***	-0.177***
	(0.0528)	(0.0524)	(0.0841)	(0.0843)	(0.0526)	(0.0518)
female*selfemployed	0.118	0.0898	0.139	0.105	0.0791	0.0583
	(0.0856)	(0.0844)	(0.136)	(0.136)	(0.0854)	(0.0835)
female*casual_labour	0.178*	0.193*	0.190	0.204	0.114	0.130
	(0.103)	(0.102)	(0.163)	(0.163)	(0.102)	(0.100)
constant	1.854***	1.599***	1.606***	1.586***	2.185***	1.688***
	(0.252)	(0.252)	(0.401)	(0.406)	(0.251)	(0.250)
N	542	542	542	542	542	542

R ²	0.145	0.162	0.093	0.093	0.115	0.147
F	4.209***	4.786***	2.531***	2.533***	3.215***	4.272***

Standard errors in parentheses;

* p<0.10, ** p<0.05, *** p<0.01

Source: calculated by author

The coefficient of $\ln(\text{income})$ is consistently positive and significant for both types of income and for all the three subjective well-being measures- SWB, PWB and LS. The magnitude of coefficients for model 1B is higher than that of model 1A for all the subjective well-being measures, implying household per-capita income has comparatively larger effect of subjective well-being than individual income. Among the other demographic factors having significant effect on SWB, coefficients of rural and asset holding are positive. Coefficients of self-employed and casual labour are negative and significant for SWB (except the coefficient of self-employed in 1B), implying regular wage-earners are better off among the three work-categories in terms of overall subjective well-being. But when the combined effect of gender and work-category are considered, SWB of female casual labours is significantly higher than male wage-earners (control group). Muslim workers have lower SWB than their Hindu counterpart. When PWB is considered as the subjective well-being indicator, only rural and asset holding are found to have significant positive influence apart from income. The coefficient values of rural and asset holding are notably higher than that for the SWB models. Apart from income, only self-employed and casual labour among all the factors significantly influencing SWB and PWB are found to have significant negative effect on LS. Additionally age, schoolyear, female (for 1B only) have significant negative effect on LS. Though rural doesn't have any significant effect on LS, but when combined with the work-categories, coefficients of all the interaction terms (except for rural casual labours in 1A) are positive and significant.

To check if the factors influencing overall subjective well-being (SWB scores) differ across groups, two segregated analysis are done using two smaller versions of equation 1. First analysis is done across work-categories; equation 2 is run for the three groups: self-employed, wage-earner and casual labour separately.

$$I_{WBi} = a + b_1 \ln(\text{income})_i + c_1(\text{age})_i + c_2(\text{schoolyear})_i + c_3(\text{unmarried})_i + c_4(\text{religious_participation})_i + c_5(\text{asset_holding})_i + c_6(\text{muslim})_i + c_7(\text{SC})_i + c_8(\text{OBC})_i + c_9(\text{female})_i + c_{10}(\text{rural})_i + c_{13}(\text{rural*female})_i + c_{18}(\text{muslim*SC})_i + c_{19}(\text{muslim*OBC})_i + c_{20}(\text{asset_holding*having_sss})_i + e_i \dots (2)$$

Table 11 presents the regression results of model 2.

Table 11: Regression results from model 2

	Self employed		Wage-earner		Casual labour
	2A-1 Individual income	2B-1 Household percapita income	2A-2 Individual income	2B-2 Household percapita income	2B-3 Household percapita income
ln(Individual income)	0.135*** (0.0412)		0.109** (0.0430)		
ln(household percapita income)		0.150*** (0.0455)		0.144*** (0.0520)	0.219*** (0.0676)
age	0.00216 (0.00244)	0.000297 (0.00231)	-0.00425* (0.00239)	-0.00373 (0.00242)	0.00120 (0.00273)
schoolyear	0.00365 (0.00574)	0.00542 (0.00567)	-0.00420 (0.00615)	-0.00365 (0.00611)	-0.00601 (0.00685)
female	0.164* (0.0944)	0.0552 (0.0814)	-0.0312 (0.0846)	-0.123* (0.0676)	0.149 (0.165)
unmarried	0.0330 (0.0741)	-0.0474 (0.0710)	-0.0365 (0.0605)	-0.0384 (0.0601)	-0.0413 (0.0768)
religious_participation	0.000511 (0.0549)	-0.000353 (0.0549)	-0.0945 (0.0618)	-0.124** (0.0608)	0.108 (0.0864)
muslim	-0.0712 (0.0628)	-0.0873 (0.0627)	-0.0947 (0.0720)	-0.0840 (0.0716)	-0.0588 (0.0675)
SC	-0.0924 (0.0594)	-0.0982* (0.0592)	0.0776 (0.0672)	0.117* (0.0675)	-0.0251 (0.0809)
OBC	-0.0348 (0.0747)	-0.0536 (0.0746)	0.0840 (0.100)	0.0558 (0.101)	-0.00602 (0.0969)
muslim*SC	0.116 (0.119)	0.134 (0.119)	-0.0647 (0.193)	-0.102 (0.193)	-0.0642 (0.138)
muslim*OBC	0.0638 (0.142)	0.0859 (0.142)	-0.0846 (0.146)	-0.0404 (0.147)	-0.0553 (0.151)
asset_holding	0.303*** (0.100)	0.272*** (0.101)	0.142 (0.0862)	0.157* (0.0854)	-0.0483 (0.0751)
asset_holding*having_sss	-0.0598 (0.0589)	-0.0785 (0.0590)	-0.0306 (0.0624)	-0.0364 (0.0622)	-0.0431 (0.0739)

rural	0.237*** (0.0609)	0.257*** (0.0613)	0.0714 (0.105)	0.0751 (0.104)	0.374*** (0.0948)
rural*female	0.0344 (0.162)	-0.0647 (0.165)	-0.111 (0.133)	-0.0888 (0.129)	-0.0567 (0.185)
constant	1.300*** (0.414)	1.415*** (0.378)	2.102*** (0.415)	1.889*** (0.454)	0.973* (0.559)
N	198	198	181	181	163
R ²	0.232	0.233	0.187	0.193	0.169
F	3.666***	3.685***	2.527***	2.631***	1.999**

The individual income model for casual labours is not shown due to insignificant F.

Standard errors in parentheses;

* p<0.10, ** p<0.05, *** p<0.01

Source: calculated by authors

Consistent with the previous result, $\ln(\text{income})$ has significant and positive effect on SWB scores for all models and all the three work categories. Rural workers are better off than urban workers in terms of overall subjective well-being (except for the wage-earner group). Coefficient of asset holding is significant and positive for self-employed and wage-earners (2B). For rest of the factors having significant effect on SWB, the pattern is not very consistent. Effect of female is positive for self-employed (2A) but negative for wage-earner group (2B), while effect of SC is negative for self-employed(2B) and positive for wage-earner (2B). Apart from these factors, coefficients of age (2A) and religious participation(2B) are significant and negative for wage-earner group only.

The second analysis is done across residing areas. Equation 3 is run on rural and urban informal workers separately.

$$\begin{aligned}
 I_{WB_i} = & a + b_1 \ln(\text{income})_i + c_1(\text{age})_i + c_2(\text{schoolyear})_i + c_3(\text{unmarried})_i + c_4(\text{religious_participation})_i \\
 & + c_5(\text{asset_holding})_i + c_6(\text{muslim})_i + c_7(\text{SC})_i + c_8(\text{OBC})_i + c_9(\text{female})_i + c_{11}(\text{selfemployed})_i \\
 & + c_{12}(\text{casual_labour})_i + c_{16}(\text{female*selfemployed})_i + c_{17}(\text{female*casual_labour})_i + c_{18}(\text{muslim*SC})_i + \\
 & c_{19}(\text{muslim*OBC})_i + c_{20}(\text{asset_holding*having_sss})_i + e_i \dots \dots (3)
 \end{aligned}$$

Table 12 presents the regression results of model 3.

Table 12: Regression results from model 3

	Urban		Rural	
	3A-1 Individual income	3B-1 Household percapita income	3A-2 Individual income	3B-2 Household percapita income
ln(Individual income)	0.141*** (0.0330)		0.0233 (0.0474)	
ln(household percapita income)		0.182*** (0.0361)		0.0613 (0.0600)
age	0.000163 (0.00179)	-0.000128 (0.00175)	-0.00237 (0.00223)	-0.00236 (0.00219)
schoolyear	-0.00473 (0.00464)	-0.00320 (0.00453)	0.00534 (0.00517)	0.00535 (0.00515)
female	0.0669 (0.0731)	-0.0365 (0.0640)	-0.0583 (0.0822)	-0.0712 (0.0824)
unmarried	0.0239 (0.0475)	-0.0134 (0.0462)	-0.250*** (0.0731)	-0.255*** (0.0726)
religious_participation	0.0106 (0.0432)	-0.00110 (0.0429)	-0.266*** (0.0808)	-0.276*** (0.0788)
muslim	-0.0999* (0.0518)	-0.0960* (0.0512)	-0.0592 (0.0520)	-0.0626 (0.0517)
SC	-0.0129 (0.0532)	0.0150 (0.0531)	-0.0256 (0.0535)	-0.0220 (0.0524)
OBC	0.0411 (0.0620)	0.00310 (0.0618)	-0.1000 (0.0913)	-0.0957 (0.0903)
muslim*SC	0.141 (0.185)	0.133 (0.183)	-0.0104 (0.0847)	-0.0141 (0.0845)
muslim*OBC	0.0480 (0.118)	0.104 (0.117)	-0.0720 (0.115)	-0.0707 (0.115)
asset_holding	0.142** (0.0618)	0.136** (0.0611)	-0.120 (0.0765)	-0.113 (0.0766)
asset_holding*having_sss	-0.0276 (0.0479)	-0.0374 (0.0474)	-0.0465 (0.0538)	-0.0595 (0.0541)
selfemployed	-0.0690	-0.0614	0.0553	0.0605

	(0.0541)	(0.0535)	(0.0643)	(0.0625)
casual_labour	-0.0961	-0.113*	-0.0644	-0.0599
	(0.0601)	(0.0596)	(0.0650)	(0.0637)
female*selfemployed	0.0697	0.0722	0.0658	0.0305
	(0.107)	(0.106)	(0.149)	(0.140)
female*casual_labour	0.150	0.127	0.145	0.149
	(0.189)	(0.187)	(0.111)	(0.110)
constant	1.554***	1.372***	3.060***	2.786***
	(0.316)	(0.307)	(0.424)	(0.480)
N	346	346	196	196
R ²	0.108	0.126	0.212	0.216
F	2.336***	2.785***	2.821***	2.881***

Standard errors in parentheses;

* p<0.10, ** p<0.05, *** p<0.01

Source: calculated by authors

Rural workers differ from urban workers significantly when they are considered in separate groups. For rural workers, being unmarried and participation in religious activity are the only factors that have significant effect on SWB. Both of them contribute negatively to SWB. For urban workers, coefficient of asset holding is positive and coefficient of Muslim is negative among the variables having significant effect. Types of work do not have any significant effect on SWB except for casual labour in urban group (3B). Coefficient of ln(income) is positive and significant but only for urban group.

6.5. Overall Discussion

In the previous section we have tried to address the two objectives undertaken by this study- evaluation of subjective well-being and finding out the major influencing factors of subjective well-being of informal workers. For the first objective, we have constructed an individual-level subjective well-being index and for the second objective, we have run three regression analysis on the constructed index. The results give an overview of how subjective well-being and its dimensions are affected by income and other demographic factors for informal workers and how they vary across residing areas and different activity types. In our study income invariably has a positive influence on overall subjective well-being as well as psychological well-being and life satisfaction. The effect is consistent across groups but not significant among rural workers group. Also, household per-capita income has bigger effect on well-being than individual income for the present study. The analysis also

shows a positive effect of property-ownership on SWB scores. Owning a house or piece of land provides a sense of security and stability and supposedly enhances well-being, though when the components are considered separately, this effect is significant only in PWB and not in LS. Rural workers score higher in SWB than urban workers. The source of this difference is probably higher PWB among rural workers, as there is no significant difference of LS scores across residing areas. Except for wage-earners, this result is consistent for the self-employed and casual labours as well. In the present study, self-employed, and casual and piece-rate worker, both groups are worse off than regular wage-earners in terms of SWB. As Schwarze (2008) and Dawson et al. (2017) suggested, lack of job security and income uncertainty affect subjective well-being negatively. Since regular wage-earners face least amount of income uncertainty, that probably contributes to a higher subjective well-being for them. Despite that, when gender and work-category are considered together, female casual labours are better off than the control group male wage earners. Many of women casual and piece-rate workers are engaged in home-based jobs (such as tailoring, setting glitter and beads in garments). This enables them to manage their work and caregiving-role with lesser stress. Moreover, responders of this group are often substantial but not the main contributor to household expenditure. It further weakens the negative impact of income uncertainty related to casual and piece-rate works for this group.

When the factors (apart from income) affecting PWB and LS are compared, PWB is found to be influenced by property ownership and residing area while LS is influenced by age, years of schooling, gender, residing area and work-category. Like SWB, property-ownership and residing in rural area result in higher PWB score as well. Our study finds small negative effects of years of schooling and age on LS. Old age is associated with health-deterioration, reduced work-capacity and thus income vulnerability (since the responders are informal workers) which can have negative impact on overall subjective well-being. On the other hand, besides many benefits of formal education, more years of schooling not only increases income aspiration but also aspiration of white-collar jobs. How these unmet aspirations can affect well-being is reflected in one responder's comment (driver by profession): "I am better off being less educated. At least I found job which I don't find embarrassing and I can provide for my family." Although self-employed and casual labours tend to have lower LS scores than wage-earners, when effect of residing area is considered together, rural self-employed and casual labours are better off than urban wage-earners. Female workers tend to have lower life-

satisfaction than male workers; a possible explanation can be their stressful gender role as caregiver (Haring et al, 1984).

The effect of gender on well-being of informal workers is not very conclusive in this study. While female workers have lower LS score, gender does not have any significant effect on PWB and SWB except for female casual labours. Gender does not have any significant effect when SWB across residing area is considered (model 3). When SWB across work-categories is considered (model 2), female self-employed workers are better off than male self-employed workers but female wage-earners are worse off than male wage-earners. Our study considered two social group parameters: religion and caste. The effect of caste-group is only observed in case of segregated analysis across work-categories. SC self-employed workers are worse off and SC wage-earners are better off than general caste workers in SWB scores. Difference between OBC and general caste is not statistically significant. While effect of belonging to a non-general caste is ambiguous, belonging to a religious minority group generally results in lower SWB. Muslim workers tend to score lower in SWB than the Hindu workers though this effect is not statistically significant when PWB and LS are considered separately. The same trend is found in urban group of workers when SWB across residing area is considered. Urban and rural determinants of SWB vary widely. The most stark difference is that neither income nor property-ownership has any significant effect in SWB of rural workers, unlike their urban counterpart.

6.6. Conclusion

This study is one of the very few studies in Indian context which attempt to evaluate subjective well-being of informal workers. The study uses a rather simple data set and thus the findings provide a basic overview of what factors influence subjective well-being of informal workers. For the present group of responders, material well-being achievements like property ownership and income continue to be a strong positive influencer of subjective well-being of informal workers. Income not only influences the overall subjective well-being but also the life satisfaction and psychological well-being when considered separately. Although a segregated analysis for rural and urban workers reveals that influence of income on subjective well-being is statistically significant only for urban workers. Among other factors, residing in rural area has a positive bias on subjective well-being of informal workers. While the factors influencing subjective well-being shows a stark difference across residing

areas, the pattern does not vary that visibly across activity types. Regular wage-earners enjoy higher subjective well-being than self-employed and casual labour and piece-rate workers. But the negative effects are over compensated for female casual labours when the combined effect of gender and types of work is considered. They have higher subjective well-being than the control group of male wage-earners. However, it will be misleading to conclude that shifting to rural area or finding a wage-job over entrepreneurship will always be gainful for an informal worker. The study uses a small cross-section dataset and therefore not adequate to conduct causal analysis. Our study provides a snapshot of the state of subjective well-being of informal workers of Hooghly district of West Bengal India, and indicates the importance of material well-being (income and property ownership) for them. To bring out more definite policy suggestions like how to effectively enhance well-being of informal workers through these indicated channels, a more causal analysis is required. Therefore the immediate future direction should be towards creating larger and more in-depth longitudinal data-series on subjective well-being indicators of informal workers suitable for more causal analysis.

Chapter 7: Decent Work of the Informal Workers

7.1. Introduction

The 2030 agenda for sustainable development lists ‘decent work and economic growth’ as goal-8 of the 17 sustainable development goals (SDGs). Introduced by International Labour Organization (ILO) in 1999, ‘decent work’ is argued to be a necessity for poverty reduction and an inclusive and fair globalization where ‘no-one is left behind’ (ILO, 2019b). The essence of decent work is a shared focus on the quality of employment besides creating maximum quantity of jobs. Therefore decent work agenda is particularly relevant in developing and underdeveloped world where the presence of unemployment, underemployment, disguised unemployment and informal employment¹⁸ is widespread and often the quality aspect of jobs (like minimum wage and healthy work-environment) are foregone to create jobs for maximum people. This chapter attempts to understand the different components of decent work achievements at individual-level for the rural and urban informal workers using seven work-based security dimensions based on People’s Security Survey (Anker, 2002). Here we consider seven sub-indices and ultimately construct one composite decent work index based on primary survey of 542 informal workers of Hooghly district, West Bengal, India. Then the impact of the relevant supply-side factors on overall decent work index of the workers will be investigated. Section 2 discusses the theoretical and practical issues of the concept of decent work. Section 3 narrows down the main research objectives. Section 4 describes the methodology of analysis. Section 5 gives an overview of the decent work dimensions measured in this paper. Section 6 investigates and discusses the effect of factors influencing decent work for the present sample of informal workers. Section 7 concludes.

7.2. A brief overview of decent work in theory and practice

7.2.1. The concept and measurement of decent work

ILO’s decent work agenda stands on four broad central ideas- employment, social security, workers’ right and social dialogue. The mix of strictly work-related dimensions and dimensions regarding workers’ social relations under a single framework makes ‘decent work’ conceptually ideal for every form of employment and inclusive to the maximum number of working population (Ghai, 2002). But in practice, translating a broad concept like this into quantifiable and comparable policy instruments

¹⁸ According to ILO 2018 estimates, informal employment comprises around 61% share of global labour force and 88.2% of Indian labour force.

for a diverse world has been a tedious and never-ending process. Among the earliest studies on quantifying the concept of decent work, Anker et al.(2002) identifies 11 broad groups of statistical indicators to measure decent work. Bescond et al.(2003) carries out an international comparison of 40 nations with a single-valued index based on seven macro indicators of decent work. Bonnet et al.(2003) provides a more detailed analysis of measuring decent work at macro(population aggregate), meso(firm/enterprise) and micro(individual) levels. They use seven work-based securities and corresponding indicators and constructed a composite index at each level. The theoretical and analytical framework of the seven work-based securities also has been the base of People's Security Survey(PSS) by ILO initiated in mid-2000 (Standing, 2002; Kantor, Unni and Rani, 2006). This framework is adaptive to regional/local needs and appropriate for getting an overview as well as a horizontal(dimension-wise) disaggregation of decent work at different measurement levels. Our study adapts this theoretical framework for a micro-level analysis and horizontally explores the decent work conditions for the group of responders.

7.2.2. Achieving decent work conditions for informal workers

Characterized by extremely heterogeneous activities, precarious working condition and concentration of working poor (Chen et al.,2004), informal economy has been a constant reality in developing and underdeveloped world. Hence some researchers have suggested upgradation of informal employment to be a more effective strategy towards decent work instead of the popular policy-suggestion of formalisation (Stuart, Samman and Hunt, 2018). But the inclusivity and detailed nature of the concept of decent work (especially at micro-level) make it particularly difficult to be effectively implemented in case of informal employment.¹⁹ Factors preventing desirable employment outcomes can be clustered into demand-side factors like employment programs, governance etc., supply-side factors like human capital formation, favorable community environment etc. and factors regarding mismatch of demand-supply like fragmented labour market information and network, mismatch due to distorted job expectations etc. (Directorate-General for International Cooperation and Development, 2018). While demand-side factors effect firms/employers, supply-side factors influence the labours. Since our study is a micro-level analysis, it discusses the individual-specific supply-side factors only with a focus on basic education. Basic education and skill-building are among the most important

¹⁹Sehnbruch et al.(2015) argued the lack of comparable data at national and international level to be one of the major reasons behind the limited impact of decent work on academics and development policies.

components of human capital formation (Samans et al.2017). But if the policies fail to promote basic education and vocational education simultaneously and in tune with market demand, that coordination failure leads to mismatch of demand-supply (Sparreboom and Staneva, 2014; Raihan and Uddin, 2018).

7.3. Research objectives

The present chapter is an adaptation of the study of Kantor et. al (2006) in the case of Hooghly district, West Bengal. Though West Bengal is considered among the Indian states with labour-friendly laws (Chowdhury, 2014), a recent report by ILO (ILO, 2018b) reveals the poor wage condition of the state compared to the national average. Among the few studies carried out so far investigating decent work condition of informal workers in West Bengal, the study of Chowdhury (2014) follows a holistic approach like Kantor et. al (2006) and investigates decent work conditions in all the seven security dimensions. But one drawback of these studies is that they discuss the decent work indicators in disaggregated manner and fail to provide an overall picture of the decent work condition of workers. Our study overcomes this drawback by constructing a decent work index besides providing overview of different indicators.

Hence the two main research objectives of this chapter are:

- evaluating decent work achievements of informal workers at individual-level to understand the pattern of decent work conditions of the group of responders.
- finding out how supply-side factors like education influence decent work conditions of informal workers for the present study.

7.4. Methodology

7.4.1. Description of the indicators

Our study mainly follows the methodological framework of Kantor et. al. (2006) for choosing the initial micro-level decent work indicators. The study of Kantor et. al.(2006) is mainly an individual-level study based on the seven work-based securities of PSS, specifically the work of Anker (2002), Standing (2002) and Unni and Rani (2003). These securities, namely labour market security, employment security, work security, job security, skill-reproduction security and representation security, have been defined and conceptualized in the following manner (Bonnet et al.,2003;

Dasgupta,2002; Kantor et al.,2006). Labour market security deals with one's 'ability' to find a decent job given the market conditions. Employment security is about having a secured and sustaining job post-employment. Work security considers having a healthy and safe working environment. Job security considers how appropriate and meaningful the job is for the worker. Skill-reproduction security assesses skill-developing and ease of skill-transfer. Lastly, representation security talks about workers' voice and their representation in social dialogue. In order to conduct a more relevant study given the local conditions of informal economy, Kantor et al.(2006) put more emphasize on employment security and less importance on the job security aspect. Since the sample is small but diverse in nature, incorporating both rural and urban responders, the indicators have been selected with the aim to accommodate this diversity across all the seven dimensions of decent work . Hence, even if they lack in giving an in-depth analysis, they are enough to provide a comprehensive overview of the decent work conditions of the responders. Table 13 gives an overview of the micro-level indicators taken for the study.

Table 13: Micro-level decent work indicators across the security dimensions

Broad dimensions of decent work	Indicators used in present study
Labour market security	All: Potential underemployment
Employment security	WE/Cas: Notice before dismissal
	All: type of contract**, having license/registration/legal recognition, having social security, fear of losing job/being out of work*
Job security	All: Satisfaction with present job, how much the present job can help get a new job, willingness to stay with present job
Work security	All: Access to basic amenities, job affecting health*, relationship with co-workers/professional acquaintances, harassment faced during work*, feeling lack of time in a day*
Skill-reproduction security	All: Received any vocational training for present job
Income security	All: Hourly income, savings per month, having personal debt*, WE/Cas: having paid leave, getting bonus, having sick leave/medical assistance/other assistance
Representation security	All: Member of any union/association related to present job
Note: All-applicable to all, WE-applicable to wage-earners only, Cas-applicable to casual labour; * - indicators of decent work deficit, ** -applicable for wage-earners, casual labours and self-employed earning profit-share	

Source: based on the indicators taken by Kantor et al. (2006)

Here is a brief descriptions of the indicators mentioned above²⁰:

²⁰ Indicators below marked with * express decent work deficit, i.e. a negative answer implies achievement. Therefore the answers are reverse-coded: 'yes' is coded with 0 and 'no' with 1.

Labour market security has the following indicator.

- i. Potential underemployment: Two indicators have been used together to construct this composite indicator: whether the responder is working more than the standard decent working hour i.e. 48 hours per week, and whether the responder is willing to work extra hours given their present working hours. If one is working not more than 48 hours per week and doesn't want to work for more hours, it can be said that their present working hours is within the standard work-time and enough remunerative for their livelihood needs. For those who is working less than 48 hours per week and wants to work more, or working more than 48 hours per week and don't want to work more, it can be said that they are not able to find enough remunerative work-hours within the decent work-time standard that will be sufficient for their livelihood needs. Hence there can be potential underemployment. But if one is working more than 48 hours per week and still wants to work for more hours, then their work-time not only exceeds the decent work-time standard but also poorly rewarded for their livelihood needs. This is the worst case of potential underemployment. These three cases are scored 3,2 and 1 respectively, 1 being the worst case of potential underemployment.

Employment security has the following indicators.

- i. Type of contract: Contract for payment/profit-share can be in written or verbal form if there is any contract at all. Though written contracts are often made informally, therefore no better than verbal contracts, we assume written payment contracts give the worker more bargaining power in case of any irregularity²¹. Type of contract is scored as 2 implies written contract, 1 implies verbal contract, 0 implies no contract.
- ii. Having license/registration/legal recognition: Although license or permit applies mainly to self-employed business owners or own-account workers, a legal professional recognition is often mandatory for an informal worker to access different government benefits²². Having license/registration/legal recognition is scored in binary: Here 1 implies 'yes', 0 implies 'no'.

²¹ In case of no contract, payment is guided by some prevalent market rate and bargain takes place after the job is done.

²² One such recognition is 'samajik mukti card' for unorganised sector workers in West Bengal which comes under the SASPFUW scheme.

- iii. Having social security: Social security system gives a safety net against income vulnerability caused by occupational mishap, health or other exogenous reasons. Social security is very relevant for informal workers who are particularly vulnerable towards income uncertainty as they often work on no-work-no-pay basis. This is also scored in binary: 1 implies 'yes', 0 implies 'no'.
- iv. Fear of losing job/being out of work*: Fear of being jobless reflects the perceived market uncertainty as well as how likely a person can keep their job. It is reverse-scored in binary: 0 implies 'yes', 1 implies 'no'.

Job security has the following indicators.

- i. Satisfaction with present job: Measured with a four point scale, satisfaction with present job implies workers' perceived sense of meaningful/quality job. The scores are: 4 implies 'very satisfied', 3 implies 'satisfied', 2 implies 'not satisfied', 1 implies 'not at all satisfied'.
- ii. Can the present job help get a new job?: This reflects the degree of skill-transfer the present job offers. But it also implies a possible professional growth of worker i.e. they are not stuck in a dead-end job. It is scored in binary: 1 implies 'yes', 0 implies 'no'.
- iii. Willingness to stay with present job: Willingness to stay in present job implies agreeability and desirability of the job. It is scored in binary: 1 implies 'yes', 0 implies 'no'.

Work security has the following indicators.

- i. Job affecting health*: An indicator of the job perceived as hazardous, it is reverse-scored in binary: 0 implies 'yes', 1 implies 'no'.
- ii. Relationship with co-workers/professional acquaintances: Amicable relation with co-workers, business-owners, employers, partners and other professional acquaintances (like suppliers, contractors, local administrative personnel and law-enforcers) indicates a cooperative and stress-less work environment. This is scored over a four-point scale: 4 implies 'very good', 3 implies 'good', 2 implies 'bad', 1 implies 'very bad'.
- iii. Harassment faced during work*: This further indicates upon safety of the working place. It is reverse-scored in binary: 0 implies 'yes', 1 implies 'no'.
- iv. Feeling lack of time in a day*: Feeling lack of time in a day indicates probable presence of time poverty and adverse effect on work-family balance. It is reverse-scored in binary, 0 implies 'yes', 1 implies 'no'.

- v. Access to basic amenities: Basic amenities at working place i.e. adequate availability of food, water and sanitation facility is a precondition of a healthy working environment. But working places for informal workers range from own home to public places like road, field or public transport. For workers operating outside home, the informal enterprises often lack steady settlements or scale of operation big enough to be provided with these facilities cost-effectively. Therefore for workers outside home²³, access to food and water during work is ranked as follows: 3 implies ‘accessed from working place’ (from own work settlement/provided by employer), 2 implies ‘accessed from public facilities’, 1 implies ‘brought from home’, 0 implies ‘inadequate access’. Access to sanitation facility is coded as: 2 implies ‘from working place’, 1 implies ‘public facility’, 0 implies ‘inadequate facility’. In case of multiple access, average of the access codes is taken, giving equal weightage to all the sources. For example, if the responder accesses food from working place as well as from home, then the score for access to food will be average of 3 and 1 i.e. 4. In case of home-based workers²⁴, the three basic amenities scores are taken to be the average scores of rest of the responders belonging to the same profession. Score for ‘access to basic amenities’ is the sum of all three scores for food, water and sanitation.

Skill-reproduction security has the following indicators.

- i. Received any vocational training for present job: Receiving formal vocational training is an indicator of skill-development. It also enhances ease of skill-transfer i.e. being treated as a skilled professional²⁵ while searching for new job. It is scored in binary, 1 implies ‘yes’, 0 implies ‘no’.

²³We assume that a person always opts for the most adequate provision and choosing a lower code implies the better option is not adequate. For example, a person will carry water only if the provision of water from working place and public facility is not satisfactory or insufficient.

²⁴Total 88 % of the responders are engaged in work outside home and the rest are in home-based jobs (including farming in own home-adjacent lands).

²⁵ However, certain professions of unorganised sectors (like fishing, pottery, idol making, embroidery, carpentry) are often practiced by traditional communities. Workshops and training programs are being developed for some of such professions to keep these traditional industries alive among the youth and integrating them to global market. But the specific sets of skill required for these professions are mostly passed within the communities across generations. This culturally-rooted informal method of skill-reproduction is no less rich than the formal vocational trainings. But due to the problem of standardization and comparability, this aspect has not been covered in present study.

Income security has the following indicator.

- i. Hourly income: The earning rates and payment schedule of informal workers vary hugely across professions. To avoid the problem of comparability all incomes have been converted to hourly wage rate. Scores: 1 implies 'less than Rs. 25 per hour', 2 implies 'Rs. 25 to Rs.50 per hour', 3 implies 'Rs.50 to Rs.75 per hour', 4 implies 'Rs. 75 to Rs.100 per hour', 5 implies 'more than Rs. 100 per hour'.
- ii. Having personal debt*: Personal debts (excluding business loans) are an indicator of inadequate earning. It is reverse-scored in binary, 0 implies 'yes', 1 implies 'no'.
- iii. Having non-wage benefits (for casual labour/wage-earner)²⁶: Among non-wage benefits, having paid leaves, getting bonus and having sick leave/medical assistance/other assistance have been considered separately. All three are scored in binary, 1 implies 'yes', 0 implies 'no'.

Representation security has the following indicator.

- i. Member of any union/association related to present job: Being member of a professional union or association not only helps a worker voicing their rights but also help them build network of information dissemination. It is scored in binary, 1 implies 'yes', 0 implies 'no'.

7.4.2. Constructing decent work index

For each responder, the sub-index for a security dimension has been calculated by taking simple arithmetic mean of the indicator scores under that dimensions. Since some indicators may not be applicable for some particular work-group, only the average of applicable indicators has been taken to avoid negative bias²⁷ due to 'not applicable' indicator scores. The seven sub-indices are normalized²⁸

²⁶ The reason of not clubbing these benefits under one category is to differentiate among these benefits and get more weightage for the worker who receives more than one such benefits. It is noticed that while bonus before a major holiday is a common practice, paid leave and medical assistance are rare.

²⁷ For example, in case of self-employed workers, scores regarding benefits from employer will not be applicable. But that should not lessen the income security index compared to employed workers.

²⁸ To avoid the zero scores of responders reporting minimum values, minimum values are taken to be zero for all responders while normalizing the sub-index values.

using the following formula to nullify the effect of different scales of measurement: For the i-th responder,

$$(\text{Normalized index value})_i = ((\text{Actual index value})_i - \text{Minimum value}) / (\text{Maximum value} - \text{Minimum value})$$

The final decent work index is calculated by taking the sum of all the seven normalized sub-indices.

7.5. Overview of the decent work conditions of responders

7.5.1. Description of the sub-indices

Labour market security

The sample average for hours of work per day is 8.6 hours and the average for hours of work per week is 50.3 hours. For 54.6 % of all responders, hours of work exceed the standard decent weekly working-hour i.e. 48 hours per week. 12.9 % of the total responders want to work for more hours even after working excessive hours i.e. they face the worst case of potential underemployment. The percentage of facing worst case of potential underemployment is highest for self-employed worker in both rural and urban areas (25.2 % for urban workers and 10.4 % for rural workers). Table 14 presents a summary of labour market security indicators.

Table 14: Labour market security indicators

Indicators	Self-employed		Regular wage-earner		Casual labour		Overall
	Rural	Urban	Rural	Urban	Rural	Urban	
Average hours of work per day	9.3	8.9	9.1	7.8	8	9.3	8.6
Average hours of work per week	58.6	54.3	58.2	43.4	51.9	42.8	50.3
Percentage of responders working excessive hours and want to work more hours	10.4%	25.2%	9.3%	10.9%	7.0%	6.5%	12.9%
Percentage of responders working excessive hours and don't want to work more hours	58.2%	38.2%	69.8%	34.8%	52.3%	18.2%	41.7%

Percentage of responders working within decent working hours and want to work more	6.0%	13.7%	2.3%	20.3%	5.8%	28.6%	14.4%
Percentage of responders working within decent working hours and don't want to work more	25.4%	22.9%	18.6%	34.1%	34.9%	46.8%	31.0%
Note: Percentages are derived with respect to the total number of responders falling under the category mentioned in the column head (like rural wage-earner, urban casual labour) excluding responders reporting NA							
Source: calculated by authors from primary survey							

Since only the potential underemployed has been used as a composite indicator of labour market security for this study, labour market security index is nothing but the indicator value. It is an ordered variable taking three values-3, 2 and 1 respectively. Table 15 presents an overview of the labour market security index.

Table 15: Overview of the labour market security index

Labour market security index	Self-employed	Regular wage-earner	Casual labour	Overall
Percentage of responders with index value 1	20.2%	10.5%	6.7%	12.9%
Percentage of responders with index value 2	56.1%	59.1%	52.8%	56.1%
Percentage of responders with index value 3	23.7%	30.4%	40.5%	31.0%
Coefficient of variation	32.6%	27.7%	25.6%	29.3%
Source: calculated by authors				

Employment security

Contracts with employer or work provider are particularly important for wage-earners, casual labour for a secured employment. Excluding self-employed working without any partnership, only 1.6 % of workers have a written contract. In case of prior notice before an unscheduled dismissal, 63.2 % of workers (excluding self-employed) have reported of getting notice from employer/work provider. Legal recognition of any form i.e. license of practicing own profession or running a business,

registration of a business, professional identity cards, is another contributor to a secured employment. Only 29.7 % of responders have some kind of legal recognition (lowest for rural casual labours- 5.8 %). 19.2 % of responders are registered under at least one government social security scheme. The main problem of government social security schemes is their lack of outreach. In our study 49.8 % of the responders have reported to have no knowledge of any social security schemes. Fear of job loss indicates the perceived sense of secured employment. Here 21.6 % of responders have reported to have fear of job-loss or being out of work. Table 16 presents a summary of employment security indicators.

Table 16: Employment security indicators

Indicators	Self-employed		Regular wage-earner		Casual labour		Overall
	Rural	Urban	Rural	Urban	Rural	Urban	
Percentage of responders getting notice before unscheduled dismissal	NA	NA	64.3%	62.3%	76.1%	51.1%	63.2%
Percentage of responders having written contract	0.0%	0.0%	11.6%	0.0%	2.3%	0.0%	1.6%
Percentage of responders having license/permit/legal recognition	23.9%	30.5%	39.5%	42.8%	5.8%	31.2%	29.7%
Percentage of responders having social security	13.4%	19.1%	27.9%	22.5%	11.6%	22.1%	19.2%
Percentage of responders having no knowledge about any social security scheme	56.7%	45.0%	34.9%	47.1%	65.1%	48.1%	49.8%
Percentage of responders having fear of job loss	14.9%	16.0%	11.6%	36.2%	11.6%	27.3%	21.6%

Note: Percentages are derived with respect to the total number of responders falling under the category mentioned in the column head (like rural wage-earner, urban casual labour) excluding responders reporting NA

Source: calculated by authors

Employment security index is an arithmetic average of all the applicable indicator scores. Table 17 presents an overview of the employment security index.

Table 17: Overview of the employment security index

Employment security index	Self-employed	Regular wage-earner	Casual labour	Overall
Maximum	1.25	1.20	1.25	1.25
Minimum	0	0.2	0.2	0

Average	0.53	0.75	0.68	0.65
Coefficient of variation	54.0%	30.2%	33.9%	41.3%

Source: calculated by authors

Job security

Job security tells about whether the person is employed in a profession that is appropriate and meaningful for them i.e. it talks about the non-monetary and non-material reward one gets from their job. Among the responders 75.3 % have reported to be satisfied with their present profession ('satisfied' or 'very satisfied') and 62.5 % responders want to stay in their present profession. But a fraction of these people decides to stay because changing profession is not a feasible option for them. Overall, for 9.6 % of responders changing job is not a feasible option, lack of alternatives, old age and lack of health to be the main reasons. On the other hand, a number of people who are satisfied with their present job want to change job for better prospect. Among the reasons for changing job, low earnings for present job have emerged to be the primary cause. And lastly, 37.7 % of responders believe their present job will help them get a new job i.e. it is not exactly a dead end job. Table 18 presents a summary of job security indicators.

Table 18: Job security indicators

Indicators	Self-employed		Regular wage-earner		Casual labour		Overall
	Rural	Urban	Rural	Urban	Rural	Urban	
Percentage of responders reported present job will help getting a new job	0.0%	55.8%	7.1%	64.9%	0.0%	67.7%	37.7%
Percentage of responders satisfied with present job (satisfied or very satisfied)	80.6%	79.4%	46.5%	79.7%	64.0%	84.4%	75.3%
Percentage of responders want to stay in present job	82.1%	68.7%	51.2%	58.0%	67.4%	44.2%	62.5%
Percentage of responders reported changing job is not a feasible option	7.5%	10.7%	9.3%	10.1%	8.1%	10.4%	9.6%

Note: Percentages are derived with respect to the total number of responders falling under the category mentioned in the column head (like rural wage-earner, urban casual labour) excluding responders reporting NA

Source: calculated by authors

Table 19 presents an overview of the job security index.

Table 19: Overview of the job security index

Job security index	Self-employed	Regular wage-earner	Casual labour	Overall
Maximum	2.50	2.50	2.50	2.50
Minimum	0.33	0.33	0.67	0.33
Average	1.36	1.30	1.24	1.31
Coefficient of variation	27.4%	31.8%	30.6%	30.0%

Source: calculated by authors

Work security

Due to a widely varied working places, job description and lack of organisation, informal workers are often compelled to work in unhealthy and even dangerous condition. 45.9 % responders feel their job is affecting their health. When the combined scores of basic amenities (food, drinking water and sanitation) are considered, 57.4 % of the responders have scored below average while rural workers have consistently scored poorer than their urban counterparts. 96.3 % of responders have reported to share a good rapport with their co-workers and other work acquaintances. Around 36.3 % responders have reported to face some kind of harassment during work from employers, coworkers, work acquaintances, police. Lack of contract, license or legal recognition aggravates these problems further. For example, a number of urban street-hawkers have reported working under regular police harassment and threat of dislocation since their business licenses are delayed and caught within in red-tapes and clientalism. On an average 52.8 % of responders have reported that they feel lack of time during a general working day and the percentage is consistently higher for urban workers than rural workers. Table 20 presents a summary of work security indicators.

Table 20: Work security indicators

Indicators	Self-employed		Regular wage-earner		Casual labour		Overall
	Rural	Urban	Rural	Urban	Rural	Urban	
Faced harassment during work	47.8%	41.2%	25.6%	25.4%	36.0%	44.2%	36.3%
Feeling lack of time	20.9%	69.5%	51.2%	73.9%	22.1%	49.4%	52.8%
Having good rapport with co-workers/work-acquaintances (reporting 'good' or 'very good')	94.3%	95.0%	95.1%	100.0%	93.9%	96.1%	96.3%
Job affecting health	16.4%	56.5%	18.6%	52.2%	31.4%	74.0%	45.9%
Combined score for access to basic amenities							

Maximum score	5	6	8	9	8	9	9
Minimum score	2	0	2	0	2	0	0
Average score	4.07	4.77	5.42	6.29	5.38	5.33	5.3
Percentage of responders scoring below average	74.6%	31.3%	55.8%	41.3%	73.3%	35.1%	57.4%

Note: Percentages are derived with respect to the total number of responders falling under the category mentioned in the column head (like rural wage-earner, urban casual labour) excluding responders reporting NA

Source: calculated by authors

Table 21 presents an overview of the work security index.

Table 21: Overview of the work security index

Work security index	Self-employed		Regular wage-earner		Casual labour	Overall
Maximum	2.40	3.00		3.20	3.20	
Minimum	0.80	0.80		0.60	0.60	
Average	1.80	2.14		1.99	1.97	
Coefficient of variation	15.2%	22.5%		24.5%	22.5%	

Source: calculated by authors

Income security

The hourly income of the responders shows a wide range of variation. Overall the hourly income varies from Rs. 0.91 to Rs. 357.14 with average Rs. 28.85 per hour. Only 45.4 % of responders reported to have savings per month and 29.5 % of responders reported of having personal debt at the time of survey. Among non-wage benefits from employer, only 8.7 % of the workers (excluding self-employed) enjoy paid leaves, 24.3 % receive bonus and 10.0 % receive medical and other assistances. Table 22 presents a summary of income security indicators.

Table 22: Income security indicators

Indicators	Self-employed		Regular wage-earner		Casual labour		Overall
	Rural	Urban	Rural	Urban	Rural	Urban	
Maximum hourly income (Rs.)	51.28	357.14	72.15	107.14	83.33	78.26	357.14
Minimum hourly income (Rs.)	8.97	3.57	8.62	0.91	6.67	5.2	0.91
Average hourly income (Rs.)	25.43	33.02	21.29	24.73	28.74	36.45	28.85
Less than Rs. 25 per hour	58.2%	55.7%	72.1%	63.0%	36.0%	18.2%	50.7%

Percentage of responders belonging to income range							
Rs.25 to Rs. 50 per hour	40.3%	27.5%	25.6%	29.0%	62.8%	68.8%	40.8%
Rs. 50 to Rs.75 per hour	1.5%	12.2%	2.3%	5.1%	0.0%	11.7%	6.3%
Rs. 75 to Rs.100 per hour	0.0%	1.5%	0.0%	0.7%	1.2%	1.3%	0.9%
More than Rs. 100 per hour	0.0%	3.1%	0.0%	2.2%	0.0%	0.0%	1.3%
Percentage of responders having debt	22.4%	40.5%	27.9%	23.9%	23.3%	35.1%	29.5%
Percentage of responders having monthly savings	82.1%	26.0%	83.7%	27.5%	70.9%	28.6%	45.4%
Percentage of responders getting paid leave	NA	NA	2.3%	20.3%	0.0%	1.4%	8.8%
Percentage of responders getting bonus	NA	NA	46.5%	52.2%	0.0%	9.6%	24.3%
Percentage of responders getting medical leave/assistance	NA	NA	4.7%	23.2%	0.0%	0.0%	10.0%

Note: Percentages are derived with respect to the total number of responders falling under the category mentioned in the column head (like rural wage-earner, urban casual labour) excluding responders reporting NA

Source: calculated by authors

Table 23 presents an overview of the income security index.

Table 23: Overview of the income security index

Income security	Self-employed	Regular wage-earner	Casual labour	Overall
Maximum	2.33	1.50	2.00	2.33
Minimum	0.25	0.17	0.17	0.17
Average	0.93	0.62	0.59	0.72
Coefficient of variation	47.3%	42.3%	39.6%	50.5%

Source: calculated by authors

Skill-reproduction security and representation security

Overall 17.5 % of responders have received formal training for their present job and 13.3 % of responders are member of a professional union. Percentage of receiving formal training is highest for regular wage-earners, while percentage of being part of an union is highest for self-employed workers. Both skill-reproduction security and representation security have only one indicator each. Therefore

the sub-index values are just the indicator score. Sub-index values range from 0 to 1. Table 24 presents an overview of the skill reproduction index and the representation security index.

Table 24: Overview of the skill-reproduction and representation security index

Percentage of responders	Self-employed	Regular wage-earner	Casual labour	Overall
Received formal training for current job	15.7%	27.1%	9.2%	17.5%
Coefficient of variation	233%	165%	315%	217%
Member of a professional union	23.2%	3.3%	12.3%	13.3%
Coefficient of variation	182%	542%	268%	256%

Source: calculated by authors

7.5.2. Overview of the composite individual level decent work index

Table 25 provides the average contributions of the seven sub-indices in the final composite individual-level decent work index (as percentage of the final index). It also presents the range, average value and dispersion of the final index for different work-categories and for the overall sample. For the present study income, skill-reproduction and representation security have the minimum contributions (21.3 % together) and labour market security has maximum contribution to the overall decent work index (22.3 %). The pattern is consistent across each work-category.

Table 25: Average contribution of the seven security dimensions in the final index

Name of sub-index	Self-employed	Regular wage-earner	Casual labour	Overall
Labour market security	19.8%	21.7%	25.9%	22.3%
Employment security	16.1%	21.7%	21.2%	19.5%
Work security	17.6%	21.5%	20.7%	19.9%
Job security	18.2%	16.4%	16.3%	17.0%
Income security	13.4%	7.6%	7.5%	9.7%
Skill-reproduction security	6.0%	9.8%	3.6%	6.6%
Representation security	8.9%	1.2%	4.8%	5.0%
Final composite index (decent work index)				
Average value	2.6115	2.757973	2.577669	2.65024
Coefficient of variation	33.8%	24.1%	27.1%	28.8%
Maximum	5.193077	4.601538	4.8	5.193077
Minimum	1.035897	1.32	0.704615	0.704615

Source: calculated by authors

Table 26 presents the distribution of decent work index across the different work-categories. Self-employed workers have maximum percentage of people having highest values of index (9.6 % having index values more than 4). But they also have maximum workers having the lowest values of index as well (24.2 % having index values less than 2). This is consistent with the previous table which shows that self-employed workers have the highest coefficient of variation (33.8 %). Regular wage-earners have the maximum percentage of workers having index values of 3 and above. Table 26 presents distribution of decent work index across work-categories and residing area.

Table 26: Distribution of decent work index across work-categories and residing area

Decent work index value	Self-employed			Regular wage-earner			Casual labour			Overall		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Less than 2	31.3%	20.6%	24.2%	25.6%	8.7%	12.7%	25.6%	9.1%	17.8%	27.6%	13.3%	18.5%
2 to less than 3	55.2%	51.1%	52.5%	62.8%	46.4%	50.3%	70.9%	46.8%	59.5%	63.8%	48.3%	53.9%
3 to less than 4	6.0%	17.6%	13.6%	9.3%	43.5%	35.4%	3.5%	36.4%	19.0%	5.6%	32.1%	22.5%
4 and above	7.5%	10.7%	9.6%	2.3%	1.4%	1.7%	0.0%	7.8%	3.7%	3.1%	6.4%	5.2%

Source: calculated by authors

7.6. Checking the effect of supply-side factors on decent work for informal workers

7.6.1. Econometric analysis

In this part of the paper, we have tried to understand the effect of individual-specific supply-side factors on the decent work condition of informal workers. For this study, formal education (years of schooling) has been considered as the primary supply-side factor. In the present sample, around 54 % of responders have crossed the barrier of primary school education (see Table 3). But only 17.5 % of the total responders have received any kind of vocational training (see Table 24). Therefore the effect of years of schooling may indicate what kind of return formal education can yield in terms of decent work if there is not adequate support of vocational training and skill building. Additionally two other supply-side factors have been considered- property ownership (asset_holding) and dependency ratio

(number of household member²⁹ per earning member). Ownership of property (house or land) improves one's wealth endowment and can provide additional stream of income, reducing financial vulnerability. On the other hand, a high dependency ratio reduces the ability of worker to bargain over the 'quality' of job. Overall decent work condition has been measured by the composite decent work index (DWI) and education has been measured by the years spent in formal schooling. Two sets of OLS models have been constructed to see whether the effect of education³⁰ differs across rural-urban (ILO ,2013) and across male-female (Bailey and Ricketts, 2003). The first set of models investigates the effects for the entire sample, combining all the three work-categories. The models are described below:

Model 4A (effect of education across work-categories and residing area):

$$\begin{aligned} DWI_i = a + & b_1(\text{schoolyear}_i) + b_2(\text{schoolyear}_i)^2 + c_1(\text{asset_holding})_i + c_2(\text{dependency_ratio})_i \\ & + d_1(\text{wage_earner})_i + d_2(\text{casual_labour})_i + d_3(\text{wage_earner} * \text{schoolyear})_i \\ & + d_4(\text{casual_labour} * \text{schoolyear})_i + d_5(\text{rural})_i + d_6(\text{rural} * \text{schoolyear})_i \\ & + d_7(\text{rural} * \text{wage_earner})_i + d_8(\text{rural} * \text{casual_labour})_i + e_i \end{aligned}$$

Model 4B (effect of education across work-categories and gender):

$$\begin{aligned} DWI_i = a + & b_1(\text{schoolyear}_i) + b_2(\text{schoolyear}_i)^2 + c_1(\text{asset_holding})_i + c_2(\text{dependency_ratio})_i \\ & + d_1(\text{wage_earner})_i + d_2(\text{casual_labour})_i + d_3(\text{wage_earner} * \text{schoolyear})_i \\ & + d_4(\text{casual_labour} * \text{schoolyear})_i + d_5(\text{female})_i + d_6(\text{female} * \text{schoolyear})_i \\ & + d_7(\text{female} * \text{wage_earner})_i + d_8(\text{female} * \text{casual_labour})_i + e_i \end{aligned}$$

The second set of models tests the effects for each of the work-categories separately. The reduced models become:

Model 5A (effect of education across residing area):

$$\begin{aligned} DWI_i = a + & b_1(\text{schoolyear}_i) + b_2(\text{schoolyear}_i)^2 + c_1(\text{asset_holding})_i + c_2(\text{dependency_ratio})_i \\ & + d_1(\text{rural})_i + d_6(\text{rural} * \text{schoolyear})_i + e_i \end{aligned}$$

Model 5B (effect of education across gender):

²⁹ Household members are counted as adult equivalent: adult equivalent of a household= (Number of members below 14 years)*0.5 + (Total number of member-number of members below 14 years).

³⁰ A quadratic term is added to see how the impact of education changes, if at all, with more years spent in formal education.

$$DWI_i = a + b_1(\text{schoolyear}_i) + b_2(\text{schoolyear}_i)^2 + c_1(\text{asset_holding})_i + c_2(\text{dependency_ratio})_i \\ + d_1(\text{female})_i + d_6(\text{female} * \text{schoolyear})_i + e_i$$

Table 27 provides the descriptive statistics of the independent variables used in the models.

Table 27: Description of the explanatory variables used in the regressions

Quantitative variables	Variable description	Maximum	Minimum	Coefficient of variation	Average	Skewness
Education	schoolyear: years of schooling (years)	17	0	86.85%	4.763838	0.201702
Dependency ratio	dependency_ratio: number of household member per earning member (fraction)	6.5	0.5	46.13%	2.27	1.21
Categorical variables						
Category	Variable description	Percentage of total sample (N=542)				Total
		Self-employed	Regular wage-earners	Casual labour		
Types of work (Control group: self-employed)	wage_earner: 1 if casual labour, 0 otherwise	-	-	-		33.39
	casual_labour: 1 if casual labour, 0 otherwise	-	-	-		30.07
Residing area	rural: 1 if residing in rural area, 0 otherwise	12.36	7.93	15.87		36.16
Gender	female: 1 if responder is female, 0 otherwise	4.24	17.53	3.87		25.65
Property ownership	asset_holding: proxy for wealth, binary variable, 1 if responder owns house and/or land, 0 otherwise	33.57	30.26	26.94		90.77
Interaction terms						
wage_earner*schoolyear	Interaction between work-categories and years of schooling; to check if effect of education varies across work-categories					
casual_labour*schoolyear	Interaction between residing area and years of schooling; to check if effect of education varies across residing area					
rural*schoolyear	Interaction between gender and years of schooling; to check if effect of education varies across gender					
female*schoolyear	Interaction between gender and years of schooling; to check if effect of education varies across gender					
rural*wage_earner	Interaction between residing area and work-categories; to check the combined effect of belonging to a particular work-category and a particular residing area on decent					
rural*casual_labour	Interaction between residing area and work-categories; to check the combined effect of belonging to a particular work-category and a particular residing area on decent					

	work
female*wage_earner	Interaction between residing area and work-categories; to check the combined effect
female*casual_labour	of belonging to a particular work-category and a particular gender on decent work
Source: calculated by authors from primary survey	

Table 28 presents the regression results of all the models described above. Since the F-statistic of model 5B for wage-earners is statistically insignificant, it has been rejected and not shown here.

Table 28: Regression results of the combined models (4A and 4B) and reduced models (5A and 5B)

Dependant variable: DWI	Model 4A (combined)	Model 4B (combined)	Model 5A-1 (Self-employed)	Model 5B-1 (Self-employed)	Model 5A-2 (Wage-earner)	Model 5A-3 (Casual labour)	Model 5B-3 (Casual labour)
schoolyear	0.0161 (0.0237)	0.00591 (0.0249)	-0.0102 (0.0408)	-0.0216 (0.0415)	0.0361 (0.0300)	-0.135*** (0.0384)	-0.164*** (0.0415)
(schoolyear) ²	0.00199 (0.00185)	0.00303 (0.00197)	0.00363 (0.00332)	0.00515 (0.00345)	-0.00315 (0.00256)	0.0147*** (0.00382)	0.0166*** (0.00429)
rural	-0.564*** (0.132)		-0.704*** (0.212)		-0.779*** (0.162)	-0.607*** (0.136)	
female		-0.126 (0.171)		-0.0115 (0.245)			-0.168 (0.250)
asset_holding	0.187* (0.0992)	0.0983 (0.106)	0.352 (0.257)	0.291 (0.270)	0.194 (0.144)	0.113 (0.123)	0.0220 (0.137)
dependency_ratio	0.0373 (0.0292)	-0.0212 (0.0317)	0.152*** (0.0551)	0.126** (0.0581)	-0.0214 (0.0495)	-0.0619 (0.0407)	-0.177*** (0.0447)
wage_earner	0.284*** (0.108)	0.326** (0.140)					
casual_labour	0.439*** (0.120)	0.238* (0.122)					
rural* schoolyear	0.0344** (0.0154)		0.0527* (0.0315)		0.0543** (0.0233)	-0.00167 (0.0221)	
wage_earner* schoolyear	-0.0312* (0.0163)	-0.0457** (0.0192)					
casual_labour* schoolyear	- (0.0185)	- (0.0190)					
rural* wage_earner	-0.129 (0.155)						
rural*casual_labour	-0.309**						

	(0.149)						
female* schoolyear	0.0314			0.0346			-0.0134
	(0.0194)			(0.0497)			(0.0370)
female* wage_earner	-0.0113						
	(0.194)						
female* casual_labour	-0.179						
	(0.235)						
Constant	2.681***	2.798***	2.317***	2.290***	3.035***	3.371***	3.501***
	(0.141)	(0.154)	(0.297)	(0.325)	(0.172)	(0.156)	(0.164)
N	542	542	198	198	181	163	163
R-sq	0.163	0.049	0.137	0.077	0.153	0.347	0.178
F	8.595***	2.253***	5.051***	2.651**	5.245***	13.84***	5.616***

Standard errors in parentheses

* p<0.10, ** p<0.05, *** p<0.01

Source: calculated by authors

The coefficient of schoolyear is negative and significant and coefficient of (schoolyear)² is positive and significant for model 5A-3, 5B-3. The signs of coefficients suggest that DWI decreases at an increasing rate with years of schooling. Coefficients of wage_earner and casual_labour are positive and significant for both model 4A and 4B, but the combined effect of work-category and years of schooling is significant and negative for both work-categories and both models. Therefore, although belonging to wage-earner, casual labour and piece-rate worker category results in a slightly higher value of DWI, more years spent in formal schooling reverse that positive effect. Coefficient of rural is consistently negative and significant for the combined model (model 4A) and model 5A (all groups). When the combined effect of work-category is considered with residing area, rural workers are worse off for both wage-earners and casual labours though the effect is significant only for casual labours. Therefore the results suggest that overall rural informal workers have lower decent work index than urban informal workers though higher years of schooling in rural area results in higher decent work index than urban area (model 1A and model 5A-2). Coefficient of asset_holding is significant and negative in model 4B, model 5A-1 and 5B-1, indicating a negative impact of owning property on DWI for this study.

For the present group of responders, gender and dependency ratio do not have any statistically significant impact on DWI. Models investigating the effect of education on decent work across residing areas (4A and 5A) have better explanatory power than the models investigating effect of

education across gender (4B and 5B). Among the three work-categories, the models work best for the group of casual labour.

7.6.2. Discussion

The results strengthen the idea that for the people who are likely to end up in unskilled and semi-skilled employment sectors, the short-run cost of acquiring basic education exceeds its long-run benefits (especially where highest years of schooling for maximum of the responders lie within eighth standard). Policy schemes to promote basic elementary education in India³¹ are targeted mainly towards proper mental and physical development of children and curbing child exploitation. Therefore separate initiatives³² have been taken to vocationalise education at secondary and higher-secondary school-level. But even this schemes would have been able to cover only 23 % of the responders who have attended school after eighth standard (see Table 3).

Consistent with the trend found from Table 26, the results show that rural workers are worse-off than urban workers. Higher concentration of agriculture and allied activities in rural area than in urban area can be a possible reason behind this result. Self-employed workers are the most disadvantageous among the three work-categories. Though they are likely to have more freedom and autonomy over their job and remuneration, working excessive hours with low return, precarious working condition and lack of protection against job uncertainty supersede those benefits. Contrary to the literature (like Samans et al.,2017), property ownership is found to have a negative impact on decent work. Though asset-holding increases bargaining power of workers, the workers may become reluctant to utilise that regarding better work condition due to reduced financial vulnerability and dependency on present job. The effect of reduced of financial vulnerability resulting from property ownership can further be countered by additional debt-burden to acquire the asset.

7.7. Conclusion

The paper first evaluates the decent work condition of the informal workers at individual level following seven work-based security dimensions. It constructs seven sub-indices and one composite decent work index for each responder. Then it investigates the effect of the supply-side factors on the

³¹ Like Sarva Siksha Abhiyan and its allied schemes(World Bank, 2008).

³² Centrally Sponsored Scheme on Vocationalisation of secondary and higher secondary education (CSS-VHSE) in schools after class VIII (Wbtetsd.gov.in.,2019).

decent work index using regression analysis. This paper is a preliminary study to get an overview of decent work condition of the group of responders. The findings indicate comparatively low achievement in income, skill-reproduction and representation security among all the dimensions. The regression analysis reveals that rural workers are worse off than urban workers and self-employed workers are likely to have the lowest values of decent work index compared to the other two work-categories. The most surprising finding of this study is the negative impact of basic education (years spent in formal schooling) on decent work index of informal workers. Low incidence of vocational training and an apparent mismatch between demand and supply-side of labour market can be possible explanations for this result. But finding out the exact reasons of ineffectiveness of basic education in improving decent work condition of informal workers in this case is beyond the scope of this paper. The findings suggest a general lack of skill-building initiatives in the survey areas. A more in-depth causal analysis can be carried out in future with additional information on local education system and market condition to go beyond that and understand the more effective ways of vocationalisation of education targeted for the poorer section of society and more importantly, reducing the cost of education.

Chapter 8: Social Capital of the Informal Workers

8.1. Introduction

The multidisciplinary research on social capital concerns with social relations at different levels and over a broad range of aspects, depending on what questions are being asked and what discipline is providing in the perspectives to find those answers. From an economic perspective, social capital can be understood as an intangible form of capital, embedded within the structures, quantities and qualities of social network between and among economic agents, as well as the shared norms, beliefs, values and behavioral codes. It can indirectly work as a factor of production through facilitating access to physical, financial, human capital, and enhancing productivity as well. For example, ‘social collateral’, i.e. networks, personal relationships and reputation, often replaces the traditional forms of collateral in case of poor’s access to formal credit (Bastelaer, 1999), or facilitating access to financial capital. Another economic perspective of understanding social capital would be social indicator of well-being, supplementary to national income accounting (Diez, 2013). Moreover, social capital has direct positive influence on a number of well-being indicators (Helliwell, 2001). Social capital becomes relevant in studying the well-being of informal workers from both of these perspectives. Due to the key characteristics of informal employment, like income poverty, human development gaps and social exclusion (Chen et al., 2004), informal workers tend to rely on social capital for their lives and livelihoods to a large extent.

In this chapter we attempt to evaluate social capital for a group of 542 informal workers residing in the rural and urban areas of Hooghly district, West Bengal, India. One of the many differences of social capital from the other forms of capital is its ownership. As social capital is generated from social relations, although an individual can exclusively invest in personal ties and contacts, and get return from their investment, there will always remain a certain amount of collective investment and return beyond individual control. Hence, social capital is simultaneously owned by the individual and the community or society concerned. Since our study is a micro-level analysis, focus has given on the individual ownership and the collective components (like shared norms) are treated as individual perceptions. Based on the theoretical structural-relational-cognitive construct of social capital proposed by Nahapiet and Ghoshal (1998), we first construct an individual-level composite social capital index. Then we investigate how income varies with social capital and other relevant demographic factors. Section 2 provides an overview of literature, Section 3 presents the research objectives, Section 4 presents the methodology of analysis, Section 5 gives an overview of the

different dimensions of social capital index and Section 6 investigates the effect of social capital index and other demographic factors on income of informal workers.

8.2. Literature Review

8.2.1. Concept of social capital

Social capital research took pace since late '80s following the works like Granovetter(1985), Bourdieu (1986), Coleman(1988), Putnam (1993). The concept has been enriched by insights from scholars of various disciplines. While the general understanding of social capital as networks, norms and trust remains widely accepted, the conceptualization and evaluation methods adapted in empirical works across globe are extremely diverse. For instance, Adler and Kwon (2002) have provided a collation of twenty definitions of social capital. Due to the diverse nature of social systems, absence of a definite measurement method or even an unanimous definition is a criticism as well as a requirement of the concept of social capital. Hence, when it comes to measurement of social capital, it is often more practical to define a conceptual framework of social capital instead of finding a perfect universal definition. Researchers like Christian Grootaert (Grootaert and Narayan, 2001; Grootaert et al., 2004) have suggested dimensions of measuring social capital according to research need. For instance, in Grootaert et al. (2004) six dimensions were identified for integrated questionnaire for social capital by World Bank with the purpose of data generation for researchers from various fields. The concept of social capital suffers from many core theoretical conflicts. Some of them are- lack of theoretical unanimity and ambiguous effect of social capital on economic development (Sabatini, 2006), whether social capital is a 'capital' at all (Bhandari and Yasunobu, 2009), the lack of distinction between 'sources' and 'outcomes' of social capital and which indicators should be used to measure social capital (Adler and Kwon, 2002; Woolcock, 2001; Narayan and Cassidy, 2001). These conflicts are still largely unresolved and often casually dealt in case of empirical analysis which further magnifies the vagueness and confusion around the topics, resulting in misleading findings. Hence social capital research has received overwhelming criticism as well (Haynes, 2009). Ben Fine, one of the strongest critics of social capital, attributes the popularity and ever-expanding concept of social capital to its weak foundation which allows the theory "to absorb all criticism by adding another variable or three rather than prompting fundamental reconsideration of the underlying approach and its continuing methodology and methods" (Fine, 2010). However, the stir created by Bourdieu's metaphorical use of

‘capital’ (Bourdieu, 1986) caught attention of mainstream economists and policymaker towards some of the crucial aspects of human well-being which was never considered previously and incorporated them into the welfare discourse.

8.2.2. Social capital and informal workers

Social capital has been widely considered as a driver of development and a tool for poverty alleviation. Studies on social capital and its specific components (like network, trust) in context of informal workers have been conducted mostly in tune with this view, i.e. social capital as a mean to enhance their economic outcomes, like labour market participation, getting new job (Behtoui, 2015; Sharma and Das, 2018), and getting credit (Hampel-Milagrosa, 2007; Kebede, 2015; Narayan and Prichett, 1999). Few studies have also pointed out how social capital can generate adverse effects. The study by Bhukuth, Ballet and Gue’rin (2015) shade light on the negative effect of social network without trust-building which results in debt bondage in brick kiln industry of Tamilnadu, India. Edelman et al(2009) have investigated how social capital can hinder value creation by “limiting trust, excluding new ideas, and providing sub-optimal solutions to problems”. The role of social capital can also be influenced and limited by the socioeconomic conditions of the workers-like infrastructure and resource availability of residing area, gender and ethnicity, and class-barrier(Das, 2004; Meert et al., 1997; Moser, 1998). This reverse causality of social capital with economic achievement has been highlighted by many researchers. While researchers like Masato and Makoto (2017) have acknowledged the presence of two-way causality, Okunmadewa et al. (2005) have argued for the reverse causality to be negligible and ignorable. Our study attempts to investigate the function of social capital in enhancing income of informal workers and whether their socioeconomic condition can influence the function of social capital.

8.3. Research objectives

Social capital has been widely considered as a tool for development and poverty alleviation despite the claims of its possible limitation due to existing socioeconomic constraints. The two research objectives of this chapter are as follows:

- i. Constructing an individual-level social capital index for informal workers
- ii. Investigating the effect of social capital index on income

8.4. Methodology

8.4.1. Selection of indicators

For our individual-level analysis we have followed the structural-relational-cognitive construct of social capital. The structural-relational-cognitive construct, first proposed by Nahapiet and Ghoshal (1998), has become a commonly accepted dimension scheme of social capital measure (Acquaah et al., 2014). Structural dimension is the “impersonal configuration of linkages between people or units” i.e. the connections an individual possess, people/group of people/associations an individual has access to and can derive benefit from (Nahapiet and Ghoshal, 1998). Structural social capital is the tangible part of social capital which can be observed and easily measured from that. Relational dimension relates to the nature and quality of interpersonal relationships like trust-trustworthiness, expectations, norms and obligations. Cognitive social capital is the shared language, codes and narratives, value, cultural and social norms. While both relational and cognitive social capital are non-tangible, cognitive social capital operates outside inter-person network of relations and connected more to the broader structures of social systems (Nahapiet and Ghoshal, 1998; Claridge, 2018). The social capital indicators under the three broad dimensions have been selected following the studies of Healy(2002) and Acquaah et al. (2014). Under Structural social capital. 15 indicators have been used. The first seven indicators enquire the responder’s contacts which they can use to get information, benefit or help when needed. The next four indicators (8-11) are the responder’s membership in different formal/semi-formal groups or organizations. No differentiation has been made about how active the responder is within the group. Last four indicators (12-15) are about the responder’s community and civic engagement. All answers are in binary, 1 stands for ‘yes’, 0 otherwise.

1. Having a friend in course of work
2. Having a relative to rely on emergency
3. Having someone non-related to rely on emergency
4. Knowing a government personnel
5. Knowing a medical person
6. Knowing a police person
7. Knowing a law person
8. Membership of union/ political party

9. Membership of any self-help group
10. Membership of any local club/festival committee
11. Membership of any NGO/welfare committee
12. Been on a trip in last one year
13. Participating in political activities in last one year
14. Participating in local community welfare activities in last one year
15. Voted in last election

For relational social capital, 13 indicators have been selected. The first three indicators enquire the responder's ability to rely on their friends and family regarding non-material personal problems. The next two indicators (4-5) are about responder's family relations. The next six indicators (6-11) are about sociability. The last two indicators are about community relation. Different scales have been used to measure the responses.

1. Shares emotional stress with a relative (binary scale, 1 for 'yes', 0 otherwise)
2. Shares emotional stress with someone non-relative (binary scale, 1 for 'yes', 0 otherwise)
3. Extent of sharing emotional stress (four-point scale: 4= always shares, 3= shares sometimes, 2=does not share if not something crucial, 1= never shares)
4. Have a say in household decision-making (four-point scale: 4= always have a say, 3= have a say most of the times, 2=do not have a say most of the time, 1= never have a say)
5. Spend family time in a day (binary scale, 1 for 'yes', 0 otherwise)
6. Number of times connecting with relatives outside home (five point scale: 5=daily, 4=weekly, 3=monthly, 2=yearly, 1=rare/irregular/no contact)
7. Number of times connecting with friends (five point scale: 5=daily, 4=weekly, 3=monthly, 2=yearly, 1=rare/irregular/no contact)
8. Number of times connecting with neighbours (five point scale: 5=daily, 4=weekly, 3=monthly, 2=yearly, 1=rare/irregular/no contact)
9. Attending social/family function in last one year (binary scale, 1 for 'yes', 0 otherwise)
10. Exchange gifts in last one year (binary scale, 1 for 'yes', 0 otherwise)
11. Participating in religious functions in last one year (binary scale, 1 for 'yes', 0 otherwise)

12. Likely to get financial help from a neighbor (binary scale, 1 for 'yes', 0 otherwise)

13. Likely to financially help a neighbor (binary scale, 1 for 'yes', 0 otherwise)

Five indicators have been selected for cognitive social capital reflecting the responder's perception about their community.

1. If the neighbourhood is cooperative in general (binary scale, 1 for 'yes', 0 otherwise)

2. Trust in police (four-point scale: 4=trusts always, 3=trusts most of the time, 2=does not trust, 1= does not trust at all)

3. Trust in local government (four-point scale: 4=trusts always, 3=trusts most of the time, 2=does not trust, 1= does not trust at all)

4. Safe to return home at night (binary scale, 1 for 'yes', 0 otherwise)

5. Communal problem in locality within last one year³³ (binary scale, 0 for 'yes', 1 otherwise)

8.4.2. Calculation of social capital index

As seen in the previous section, the indicators are measured using different scales ranging from binary to five-point scales. These scales are monotonic but not equidistant. Taking extent of sharing emotional stress measured with a four-point scale as an example, "always shares"(4), "shares sometimes"(3) and "does not share if not something crucial"(2) do show monotonic decrease in responder's ability to rely emotionally on their friends and family. But there is no reason to think that the difference between first two and the difference between last two account for same amount of decrease in their access to emotional support. Also, the cut-off points of two four-point scales, say, for 'extent of sharing emotional stress' and for 'Have a say in household decision-making', do not have the same relative positions for the lack of equal distance property. Converting all of these scale to a common scale to make them comparable will be misleading therefore³⁴. The only logical way of

³³ During our survey we saw that responders residing in the same neighbourhood have different answers to this question. Where a big turmoil is likely to generate a same answer for a locality, smaller clashes are often ignored or normalized by people who are not directly involved or suffered from such clashes.

³⁴ Suppose we convert all the scales to 0-100 and the four-point scales become 0-33.33-66.66-100. Since the initial problem of unequal distance will still remain, these numbers will give a false sense of quantitative comparability. Because if accurate quantification could be possible, '2' indicator score could have two different values other than 33.33 for two different indicators.

understanding the indicator scores is treating the scores as ranks. So sum or average of these scores will also act like combined rank and provide a comparative position of a responder with respect to others.

For every responder, arithmetic mean of the indicator scores under each of the three dimensions has been calculated. The sub-index for a dimension has been calculated by taking the normalized³⁵ values of the arithmetic mean. Therefore for the i-th responder, the sub-index of the j-th dimension will be,

(Normalized index value)_{ij} =

$$\frac{((\text{Actual index value})_{ij} - \text{Minimum value}_j)}{(\text{Maximum value}_j - \text{Minimum value}_j)},$$

i=1,2...,542; j=1,2,3;

Hence, there are three sub-index values for each responder. Final composite social capital index is the sum of the three sub-indices³⁶ i.e. structural, relational and cognitive social capital indices.

8.5. Overview of the social capital components

Structural Social Capital

It came out from our field survey that on an average, 57.20% of the responders have friends in course of work. The percentages are higher for urban respondents in all three work-categories. In case of emergency contacts, responders report to have more non-relative contacts (80.81%) than the relatives (13.10%) and this trend is consistent for workers of all groups. In general, responders are likely to have acquaintance with a government personnel (41.70% or police (42.99%) than someone working in the field of law (22.69%). Contrary to expectation, responders are least likely to know someone in the field of medical practice (13.10%), trend being consistent with all groups. In contrast with an average 10.15% of the responders having membership of a worker's union/political party or 10.52% of the

³⁵ Normalized values are here considered because the scale of the indicators is not same. Here the minimum value is set to zero to avoid zero sub-index values.

³⁶ Example: Suppose the arithmetic means of the three dimensions are 0.47, 1.85 and 2 respectively, and the maximum values under those dimensions are 0.8, 2.38 and 2.2 respectively. Then the sub-indices for each of those dimensions will be the normalized values of those arithmetic means. So the sub-indices become 0.58(=0.47/0.8), 0.77(=1.85/2.38) and 0.91(=2/2.2) and the final index becomes 2.26(=0.58+0.77+0.91)

responders participating in political activities, 95.39% of the responders casted their vote in last election. Overall, rural workers tend to have lower percentages than their urban counterpart for most of the structural social capital indicators. Table 29 presents an overview of the structural social capital indicators.

Table 29: Overview of the structural social capital indicators

Social capital indicators	Self-employed		Wage-earner		Casual labour		Overall
	Rural	urban	Rural	urban	Rural	urban	
Having friends in course of work	31.34%	71.76%	39.53%	67.39%	24.42%	83.12%	57.20%
Having a relative to rely in emergency	5.97%	14.50%	20.93%	15.94%	10.47%	10.39%	13.10%
Having a non-relative to rely in emergency	92.54%	76.34%	65.12%	74.64%	91.86%	85.71%	80.81%
Knowing a government personnel	25.37%	63.36%	2.33%	49.28%	15.12%	57.14%	41.70%
Knowing a police personnel	26.87%	59.54%	25.58%	53.62%	9.30%	57.14%	42.99%
Knowing a law personnel	25.37%	30.53%	13.95%	23.19%	17.44%	16.88%	22.69%
Knowing a medical personnel	1.49%	25.19%	0.00%	18.84%	0.00%	14.29%	13.10%
Member of union/ political party	10.45%	26.72%	6.98%	2.17%	1.16%	7.79%	10.15%
Member of SHG	1.49%	28.24%	32.56%	31.16%	8.14%	31.17%	23.25%
Member of local club/religious committee	1.49%	6.11%	0.00%	5.07%	0.00%	15.58%	5.17%
Member of NGO/welfare committee	0.00%	2.29%	0.00%	1.45%	0.00%	5.19%	1.66%
Been on a trip in last one year	25.37%	40.46%	27.91%	26.81%	12.79%	31.17%	28.41%
Participating in political activities	10.45%	21.37%	4.65%	4.35%	1.16%	16.88%	10.52%
Participating in local community welfare activities	40.30%	64.89%	20.93%	46.38%	12.79%	58.44%	44.46%
Voted in last election	97.01%	95.42%	100.00%	94.20%	95.35%	93.51%	95.39%

Note: Percentages are derived with respect to the total number of responders falling under the category mentioned in the column head

Source: Calculated by authors

Table 30 presents an overview of structural social capital index across work-categories and residing areas.

Table 30: Overview of structural social capital index across work-category and residing areas:

Structural SCI												
Statistics	Self-employed			Wage-earner			Casual labour			Overall		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Max	0.667	0.917	0.917	0.500	0.917	0.917	0.500	1.000	1.000	0.667	1.000	1.000
Min	0.167	0.083	0.083	0.167	0.083	0.083	0.083	0.167	0.083	0.083	0.083	0.083
Mean	0.330	0.522	0.457	0.300	0.429	0.398	0.250	0.487	0.362	0.288	0.477	0.409
Coefficient of variation	39.0%	39.1%	44.5%	35.4%	42.1%	43.8%	36.2%	34.7%	49.2%	39.3%	40.1%	46.6%

Source: Calculated by authors

Relational SCI

It is observed from field survey that 71.40% of responders share their emotional stress with at least sometimes. Unlike emergency contacts, responders tends to share their problems and emotions more within family and relatives (64.21%) than with friends and neighbors (26.57%). 88.19% of responders report to command respect and their opinions be taken seriously in the household decision-making process and 93.73% of the responders report to spend time with their family members at least once within a day, mostly during lunch or dinner. When it comes to keep touch with people outside home, 26.75% of the responders report to have irregular, rare no contacts with their family. The percentage is higher in case of friends (37.08%) but drops sharply in case of neighbors (8.12%). The frequency of contacts is generally higher for urban workers than their rural counterpart but no distinct pattern can be seen across the work-categories. Moving towards more impersonal and community-oriented forms of social interactions, around three fourth of the responders report that they have attended social or family functions and exchanged gifts in past one year, 45.20% of responders report that they have attended religious functions in past one year, and around 66% of the responders are likely to help a neighbor and get help from a neighbor financially. The percentage values are generally higher towards urban workers and the difference is sharpest in case of attending religious functions. Here also, no distinct pattern can be seen across the work-categories. Table 31 presents an overview of the relational social capital indicators.

Table 31: Overview of the relational social capital indicators

Social capital indicators	Self-employed		Wage-earner		Casual labour		Overall
	Rural	urban	Rural	urban	Rural	urban	
Shares emotional stress*	70.15%	70.99%	60.47%	76.09%	58.14%	85.71%	71.40%
Sharing emotional stress with							
Relative	83.58%	53.44%	74.42%	54.35%	88.37%	50.65%	64.21%
No-relative	16.42%	23.66%	30.23%	33.33%	11.63%	42.86%	26.57%
Have a say in household decision-making*	95.52%	87.02%	74.42%	87.68%	86.05%	94.81%	88.19%
Spend family time in a day	97.01%	97.71%	100.00%	94.93%	86.05%	87.01%	93.73%
Connecting with relatives outside home							
Daily	0.00%	27.48%	0.00%	23.91%	10.47%	35.06%	19.37%
Weekly	34.33%	29.01%	27.91%	31.16%	25.58%	38.96%	31.00%
Monthly	35.82%	12.21%	39.53%	7.97%	20.93%	5.19%	16.61%

Yearly/occasional	7.46%	0.76%	13.95%	2.17%	16.28%	1.30%	5.54%
Rare or no contact	22.39%	30.53%	9.30%	34.78%	26.74%	19.48%	26.75%
Connecting with friends							
Daily	13.43%	67.18%	11.63%	52.17%	9.30%	57.14%	41.70%
Weekly	35.82%	6.87%	34.88%	11.59%	18.60%	18.18%	17.34%
Monthly	4.48%	1.53%	2.33%	2.17%	5.81%	0.00%	2.58%
Yearly/occasional	0.00%	0.76%	4.65%	0.72%	2.33%	1.30%	1.29%
Rare or no contact	46.27%	23.66%	46.51%	33.33%	63.95%	23.38%	37.08%
Connecting with neighbors							
Daily	85.07%	80.15%	74.42%	77.54%	66.28%	92.21%	79.15%
Weekly	14.93%	5.34%	16.28%	10.14%	13.95%	3.90%	9.78%
Monthly	0.00%	0.76%	0.00%	0.00%	17.44%	0.00%	2.95%
Yearly/occasional	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Rare or no contact	0.00%	13.74%	9.30%	12.32%	2.33%	3.90%	8.12%
Attending social/family function	74.63%	79.39%	69.77%	76.09%	66.28%	81.82%	75.46%
Exchange gifts	77.61%	81.68%	69.77%	73.91%	73.26%	81.82%	76.94%
Participating in religious functions	5.97%	72.52%	6.98%	54.35%	3.49%	84.42%	45.20%
Got financial help from a neighbour	67.16%	74.05%	44.19%	63.04%	68.60%	66.23%	66.05%
Financially helped a neighbour	49.25%	83.21%	37.21%	75.36%	43.02%	81.82%	66.79%

Note:

- Percentages are derived with respect to the total number of responders falling under the category mentioned in the column head
- * for indicators measured in four-point scale, the percentage represents percentage of responders in the group having score 3 or 4.

Source: Calculated by authors

Table 32 presents an overview of relational social capital index across work-categories and residing areas.

Table 32: Overview of relational social capital index across work-category and residing area

Relational SCI												
Statistics	Self-employed			Wage-earner			Casual labour			Overall		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Max	0.871	1.000	1.000	0.935	1.000	1.000	0.903	1.000	1.000	0.935	1.000	1.000
Min	0.419	0.323	0.323	0.355	0.323	0.323	0.419	0.419	0.419	0.355	0.323	0.323
Mean	0.718	0.771	0.753	0.675	0.746	0.729	0.653	0.828	0.736	0.680	0.774	0.740
Coefficient of variation	14.3%	19.4%	18.3%	21.6%	20.2%	20.9%	16.9%	14.7%	19.7%	17.5%	19.0%	19.6%

Source: Calculated by authors

Cognitive SCI

It came out from our field survey that 88.93% of responders think they have a helpful or cooperative neighbourhood. 71.77% of responders have felt safe to return home at night. While higher percentage of rural workers perceive their neighbourhood to be cooperating, higher percentage of urban workers feel safe to return home at night. 66.61% of the responders have trust in local police administration and 79.15% have trust in the local government bodies. Trust in local government bodies supersedes trust in local police administration for all the groups. Percentage of responders reported to have communal problems in their locality is higher for urban workers than their rural counterpart. Table 33 gives an overview of the cognitive social capital indicators.

Table 33: Overview of the cognitive social capital indicators

Social capital indicators	Self-employed		Wage-earner		Casual labour		Overall
	Rural	urban	Rural	urban	Rural	urban	
helping neighbourhood?	98.51%	94.66%	86.05%	76.81%	96.51%	85.71%	88.93%
Trust in police*	65.67%	70.23%	44.19%	81.88%	58.14%	55.84%	66.61%
Trust in local government*	89.55%	77.10%	65.12%	84.06%	81.40%	70.13%	79.15%
Safe to return home at night	53.73%	79.39%	48.84%	87.68%	53.49%	79.22%	71.77%
Communal problem in locality	7.46%	47.33%	6.98%	22.46%	10.47%	42.86%	26.38%
Note:							
- Percentages are derived with respect to the total number of responders falling under the category mentioned in the column head * for indicators measured in four-point scale, the percentage represents percentage of responders in the group having score 3 or 4.							
Source: Calculated by authors							

Table 34 presents an overview of cognitive social capital index across work-categories and residing areas.

Table 34: Overview of cognitive social capital index across work-category and residing area

Cognitive SCI												
Statistics	Self-employed			Wage-earner			Casual labour			Overall		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Max	0.818	1.000	1.000	0.818	1.000	1.000	0.818	0.909	0.909	1.000	0.818	1.000
Min	0.545	0.364	0.364	0.455	0.273	0.273	0.455	0.364	0.364	0.273	0.545	0.364

Mean	0.726	0.709	0.714	0.664	0.731	0.715	0.704	0.672	0.689	0.707	0.726	0.709
Coefficient of variation	13.0%	17.3%	15.9%	14.5%	16.5%	16.6%	15.4%	18.9%	17.2%	16.6%	13.0%	17.3%

Source: Calculated by authors

Overview of the composite social capital index

Table 35 presents the covariance matrix for the three sub-indices. For the present group of responders, structural, relational and cognitive components of social capital are positively correlated to each other.

Table 35: covariance matrix for the three sub-indices

	Structural SCI	Relational SCI	Cognitive SCI
Structural SCI	1.0000		
Relational SCI	0.3984	1.0000	
Cognitive SCI	0.0191	0.0015	1.0000

Source: Calculated by authors

Table 36 presents summary statistics of the composite social capital index across work-categories and residing areas.

Table 36: Summary statistics of the composite social capital index across work-categories and residing areas

Statistics	Self-employed			Wage-earner			Casual labour			Overall		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
max	2.291	2.761	2.761	2.009	2.670	2.670	1.926	2.780	2.780	2.291	2.780	2.780
min	1.131	1.027	1.027	1.099	0.961	0.961	1.242	1.304	1.242	1.099	0.961	0.961
mean	1.773	2.002	1.925	1.639	1.906	1.843	1.607	1.987	1.787	1.671	1.961	1.856
Coefficient of variation	11.9%	15.6%	15.7%	13.5%	16.5%	17.2%	9.9%	12.9%	15.9%	12.3%	15.5%	16.5%

Source: Calculated by authors

Table 37 presents the distribution of the index across work-categories and residing areas. Self-employed workers have lowest percentage of responders having index values less than 1.5 and highest percentage of responders having index values greater than 2. Urban workers have higher percentage of responders belonging high index value group than rural workers for all work-categories.

Table 37: Distribution of the index across work-categories and residing areas

Index value	Self-employed			Wage-earner			Casual labour			Overall		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Low (index value less than 1.5)	4.48%	5.34%	5.05%	25.58%	12.32%	15.47%	24.42%	2.60%	14.11%	17.86%	7.51%	11.25%
Medium (index value 1.5 to less than 2)	79.10%	42.75%	55.05%	72.09%	41.30%	48.62%	75.58%	51.95%	64.42%	76.02%	44.22%	55.72%
High (index value 2 and above)	16.42%	51.91%	39.90%	2.33%	46.38%	35.91%	0.00%	45.45%	21.47%	6.12%	48.27%	33.03%

Source: Calculated by authors

8.6. Relationship between income and social capital of the informal workers

8.6.1. Econometric analysis

In this section the relationship between income and social capital will be investigated. There have been ample amount of research on the role of social capital in income generation in general (Narayan and Prichett, 1999; Wolz et al., 2005; Zhang et al., 2011). But the role of socioeconomic parameters in determining and often limiting the ability of social capital to improve economic condition is not much discussed (Bardhan and Singh, 2004; Ferragina, 2013). Therefore we have tried to see not just the impact of social capital on income but also how that impact changes with difference in socioeconomic status of the responder. In our analysis we take Individual monthly income as measure of income. As the earning pattern and associated uncertainty vary across the residing areas and types of work, we have divided the responders into six groups: rural self-employed, rural wage-earner, rural casual labour, urban self-employed, urban wage-earner and urban casual labour. Then two indicators have been combined for existing socioeconomic condition or affluence - whether the responder owns any house/land or not (asset holding), and whether a responder's income lies above their group-average

household percapita monthly income³⁷ or not. If their income falls below the group-average then the responder is at the poorer side of income distribution. The variable for affluence thus becomes the product of household percapita income above average and asset-holding, i.e. the responder is considered to be affluent if their household percapita income lies above the respective group average and they own a house/land. Along with these variables, some other demographic factors are considered such as- age, years of schooling, types of activity, residing area, gender, religion, caste and marital status. Equation 6 is the regression model for i-th responder:

$$(Income)_i = a_{1i} + a_{11}(Social\ capital\ index)_i + a_{12}(Affluence)_i * (Social\ capital\ index)_i + a_{13}(rural)_i + a_{14}(wage_earner)_i + a_{15}(casual_labour)_i + a_{16}(female)_i + a_{17}(schoolyear)_i + a_{18}(muslim)_i + a_{19}(SC)_i + a_{110}(OBC)_i + a_{111}(unmarried)_i + a_{112}(age)_i + e_{1i} (6)$$

A non-zero value of the coefficient a_{12} implies the impact of social capital on income is not independent of the existing socioeconomic condition. While b_{11} captures the effect of social capital indices on income when responder’s income falls below respective group average income, $(a_{11} + a_{12})$ captures the effect of social capital indices on income when responder’s income lies above respective group average income.

Table 38 provides the description of explanatory variables used.

Table 38: Description of explanatory variables used

Quantitative variables					
Variable name	Variable description	Maximum	Minimum	Average	Coefficient of variation (%)
Social capital index	Composite social capital index	2.78	0.961	1.856	16.5%
Structural SCI	Structural social capital index	1	0.083	0.409	46.6%
Relational SCI	Relational social capital index	1	0.323	0.74	19.6%

³⁷ Household percapita monthly income= average monthly household income/adult equivalent family members of the household where adult equivalent of a household= (Number of members below 14 years)*0.5 + (Total number of member-number of members below 14 years)

Cognitive SCI	Cognitive social capital index	1	0.364	0.709	17.3%
age	Age of responder (years)	76.00	16.00	38.77	28.6%
schoolyear	Year of schooling (years)	17.00	0.00	4.76	86.9%

Categorical variable

Category/Variable name	Variable description		Percentage of total population	
Types of activity (control group: Self-employed)	wage_earner : 1 if wage-earner, 0 otherwise		33.39	
	casual_labour: 1 if casual labour, 0 otherwise		30.07	
Residing area	rural: 1 if residing in rural area, 0 otherwise		36.16	
Gender	female: 1 if female, 0 otherwise		25.6	
Religion	muslim: 1 if Muslim, 0 otherwise		31.5	
Caste (control group: general)	SC: 1 if belongs to scheduled caste, 0 otherwise		23.43	
	OBC: 1 if belongs to other backward castes, 0 otherwise		15.88	
Marital status	unmarried: 1 if unmarried, widow/widower, separated, 0 otherwise		15.35	
Income above average	6 groups have been considered-urban self-employed, urban wage-earner, urban casual labour, rural self-employed, rural wage-earner, and rural casual labour. The variable is a binary variable-1 if income lies above group average and 0 otherwise.			
Group name	Individual monthly income		Household percapita monthly income	
	Average(Rs.)	Percentage of responders above average	Average(Rs.)	Percentage of responders above average
Rural self-employed	6055.47	34.3	2175.41	47.8
Urban self-employed	6912.21	38.2	2870.80	42.0
Rural wage-earner	4858.14	44.2	2281.99	27.9
Urban wage-earner	4378.55	51.4	2532.35	46.4
Rural casual labour	6119.18	46.5	2134.64	58.1

Urban casual labour	6212.34	45.5	3295.33	58.4
Total	5772.98	48.15	2595.46	39.29

Source: calculated from primary survey

No multicollinearity is found among the explanatory variables. OLS method has been used to estimate equation 6 with composite social capital index as well as the three sub-indices for individual monthly income. Table 39 presents the result of the four models.

Table 39:Regression results for equation 6

Dependent variable	Individual monthly income	Individual monthly income	Individual monthly income	Individual monthly income
Social capital index	1334.6*** (471.6)			
(Affluence)*(Social capital index)	1342.7*** (126.9)			
Structural SCI		2109.0*** (790.6)		
(Affluence)*(Structural SCI)		6117.3*** (500.9)		
Relational SCI			-218.0 (930.3)	
(Affluence)*(Relational SCI)			3305.4*** (322.5)	
Cognitive SCI				-1376.5 (1062.5)
(Affluence)*(Cognitive SCI)				3334.2*** (346.0)
Rural	-415.5 (308.8)	14.55 (302.6)	-888.3*** (295.1)	-1030.0*** (279.6)
Wage-earner	-474.3 (305.0)	-379.3 (291.3)	-535.0* (311.6)	-510.7 (315.3)
Casual labour	-93.60 (293.6)	91.46 (281.2)	-259.9 (298.2)	-247.6 (302.6)
Female	-3075.3*** (317.6)	-2860.3*** (303.3)	-3370.1*** (321.1)	-3489.5*** (314.2)
Schoolyear	83.88*** (29.76)	69.85** (28.98)	100.1*** (30.08)	95.60*** (30.43)
Muslim	494.7* (308.8)	503.3* (302.6)	452.9 (295.1)	428.8 (279.6)

	(274.2)	(261.6)	(280.2)	(284.8)
SC	547.5*	617.0**	574.0*	527.9*
	(296.3)	(282.5)	(303.0)	(306.7)
OBC	185.2	76.02	238.8	240.6
	(329.0)	(313.9)	(336.4)	(340.2)
unmarried	-912.2***	-919.3***	-1014.6***	-988.5***
	(328.6)	(313.3)	(335.4)	(338.7)
Age	-49.94***	-47.63***	-52.11***	-53.10***
	(11.67)	(11.13)	(12.12)	(12.17)
constant	4785.5***	6038.9***	7781.3***	8796.5***
	(1136.3)	(693.0)	(1022.2)	(923.1)
N	542	542	542	542
R-square	0.445	0.495	0.420	0.406
Adjusted R-square	0.432	0.483	0.407	0.392
F	35.30***	43.18***	31.90***	30.11***

Standard errors in parentheses

* p <0.1 , ** p<0.05, *** p<0.01

Source: Calculated by authors

Generally, the effect of social capital on income is positive (coefficients of social capital index and structural social capital index are positive and significant while coefficients of relational and cognitive social capital are negative but not significant). Moreover, increase in social capital results in significantly higher income gain for people with better socioeconomic condition (coefficients of the interaction term between social capital index and Affluence are positive and significant for all models).

Among the control variables, wage_earner, age, female and unmarried have significant negative effect on income while schoolyear, muslim and SC have significant positive effect. Impact of rural is ambiguous.

Next, we have done three segregated analysis to get better insights using smaller versions of equation 6. The first analysis is across residing areas. Equation 7 is run on rural and urban group of responders separately. The results are presented in Table 40-41.

$$\begin{aligned}
 (\text{Income})_i = & b_{1i} + b_{11}(\text{Social capital index})_i + b_{12}(\text{Affluence})_i * (\text{Social capital index})_i + \\
 & b_{13}(\text{wage_earner})_i + b_{14}(\text{casual_labour})_i + b_{15}(\text{female})_i + b_{16}(\text{schoolyear})_i + b_{17}(\text{muslim})_i + \\
 & b_{18}(\text{SC})_i + b_{19}(\text{OBC})_i + b_{110}(\text{unmarried})_i + b_{111}(\text{age})_i + e_{2i} \dots \dots \dots (7)
 \end{aligned}$$

Table 40: Regression results for equation 7

Dependent variable	Individual monthly income	Individual monthly income	Individual monthly income	Individual monthly income
Group	Urban	Rural	Urban	Rural
Social capital index	1230.6** (603.4)	1479.0** (675.6)		
(Affluence)*(Social capital index)	1671.2*** (177.5)	492.1*** (137.9)		
Structural SCI			1881.0* (1013.3)	2385.1* (1210.8)
(Affluence)*(Structural SCI)			6653.3*** (646.2)	2910.6*** (735.5)
wage_earner	-660.3 (415.3)	-193.0 (347.9)	-456.2 (401.1)	-321.0 (335.3)
casual_labour	-663.9 (449.8)	529.5* (281.7)	-393.8 (436.3)	550.8** (274.5)
female	-3301.0*** (456.8)	-2333.0*** (321.9)	-3136.7*** (442.3)	-2312.6*** (315.1)
schoolyear	127.6*** (40.57)	-0.746 (34.86)	105.1*** (40.17)	2.826 (33.85)
muslim	792.1* (404.8)	385.7 (269.1)	702.4* (390.6)	329.2 (262.3)
SC	453.4 (455.1)	763.9*** (269.6)	523.0 (438.0)	776.7*** (265.4)
OBC	-9.808 (471.4)	459.7 (333.9)	-108.9 (454.7)	400.2 (327.3)
unmarried	-908.6** (418.0)	-756.6 (477.8)	-855.6** (403.2)	-1040.8** (468.6)
age	-48.47*** (15.55)	-47.11*** (14.43)	-48.55*** (15.00)	-47.21*** (14.14)
constant	4736.3*** (1423.9)	4587.8*** (1457.0)	6129.7*** (895.4)	6415.1*** (819.1)
N	346	196	346	196
R-square	0.489	0.418	0.524	0.436
Adjusted R-square	0.472	0.384	0.509	0.402
F	29.04***	12.03***	33.46***	12.92***

Standard errors in parentheses

* p <0.1 , ** p<0.05, *** p<0.01

Source: Calculated by authors

Table 41: Regression results from equation 7 (continued)

Dependent variable	Individual monthly income	Individual monthly income	Individual monthly income	Individual monthly income
Group	Urban	Rural	Urban	Rural
Relational SCI	448.0 (1241.5)	375.6 (1194.4)		
(Affluence)*(Relational SCI)	4133.7*** (454.5)	1163.4*** (341.3)		
Cognitive SCI			-2364.8* (1424.5)	203.3 (1252.5)
(Affluence)*(Cognitive SCI)			4577.2*** (511.4)	1045.5*** (334.6)
wage_earner	-674.7 (424.1)	-372.2 (345.3)	-630.2 (430.5)	-326.1 (364.0)
casual_labour	-861.0* (463.1)	315.5 (273.9)	-791.2* (465.7)	310.1 (271.5)
female	-3648.3*** (451.4)	-2419.3*** (346.2)	-3737.3*** (452.0)	-2559.6*** (328.4)
schoolyear	144.8*** (41.24)	19.76 (34.59)	134.4*** (41.55)	23.97 (34.00)
muslim	784.4* (413.6)	311.8 (271.7)	774.1* (418.7)	333.5 (277.7)
SC	425.2 (465.6)	803.7*** (274.3)	476.4 (469.0)	749.6*** (277.0)
OBC	100.1 (480.9)	416.4 (338.6)	114.1 (484.5)	393.1 (340.5)
unmarried	-1006.7** (425.9)	-841.9* (484.5)	-1000.3** (429.3)	-824.7* (491.0)
age	-46.28*** (16.05)	-52.63*** (14.82)	-48.15*** (16.18)	-54.37*** (14.43)
constant	6830.4*** (1317.4)	7087.6*** (1207.6)	8996.1*** (1236.6)	7297.0*** (1125.8)
N	346	196	346	196
R-square	0.467	0.401	0.457	0.393
Adjusted R-square	0.450	0.365	0.439	0.357
F	26.64***	11.18***	25.54***	10.84***
Standard errors in parentheses				
* p <0.1 , ** p<0.05, *** p<0.01				
Source: Calculated by authors				

The effect of social capital on income and the way this effect varies with socioeconomic condition are consistent with the previous models for both urban and rural scenario. But coefficients of cognitive

social capital are negative and significant for urban model, implying increase in social capital may have detrimental effect on income as well.

Among the control variables, effect of age, unmarried, female, schoolyear, Muslim and SC do not differ from the previous models. But the effect of schoolyear and Muslim is significant in urban models only and the effect of SC is significant in rural models only. Effect of Casual labour on income is generally positive for urban workers and negative for rural workers.

The second analysis is done across the work-categories. Equation 8 is run on self-employed, wage-earner and casual labour groups separately. The results are presented in Table 42-43.

$$(\text{Income})_i = c_{1i} + c_{11}(\text{Social capital index})_i + c_{12}(\text{Affluence})_i * (\text{Social capital index})_i + c_{13}(\text{rural})_i + c_{14}(\text{female})_i + c_{15}(\text{schoolyear})_i + c_{16}(\text{muslim})_i + c_{17}(\text{SC})_i + c_{18}(\text{OBC})_i + c_{19}(\text{unmarried})_i + c_{110}(\text{age})_i + e_{3i} \dots \dots \dots (8)$$

Table 42: Regression results for equation 8

Dependent variable	Individual monthly income	Individual monthly income	Individual monthly income	Individual monthly income	Individual monthly income	Individual monthly income
Group	Self-employed	Wage-earner	Casual labour	Self-employed	Wage-earner	Casual labour
Social capital index	2201.5** (882.2)	826.8 (741.9)	525.7 (744.0)			
(Affluence)*(Social capital index)	1786.4*** (239.2)	1165.3*** (211.4)	642.1*** (179.7)			
Structural SCI				2056.1 (1424.8)	3019.7** (1362.8)	1125.1 (1197.5)
(Affluence)*(Structural SCI)				7477.6*** (897.2)	5346.8*** (844.4)	3263.5*** (817.7)
rural	-1077.7* (549.6)	154.9 (535.6)	-355.4 (484.1)	-503.5 (566.6)	606.3 (498.1)	-144.8 (463.4)
female	-4222.0*** (741.2)	-3229.9*** (448.7)	-2811.4*** (496.0)	-4001.4*** (713.3)	-2773.2*** (430.9)	-2608.9*** (493.7)
schoolyear	54.30 (59.88)	18.03 (45.37)	121.0*** (43.40)	56.81 (58.56)	-9.986 (44.45)	124.3*** (43.00)
muslim	555.7 (555.4)	313.5 (453.7)	721.2** (357.7)	303.2 (532.0)	426.8 (431.2)	761.2** (351.4)
SC	-463.2	971.3**	838.1*	-190.9	933.3**	883.9**

	(562.7)	(482.6)	(455.9)	(544.3)	(455.7)	(444.9)
OBC	-347.0	657.3	27.22	-629.4	540.8	50.76
	(634.8)	(549.1)	(436.0)	(612.1)	(521.1)	(428.6)
unmarried	-1431.8*	-471.5	-1092.3**	-1316.5*	-400.7	-1256.1**
	(746.1)	(457.0)	(485.4)	(717.8)	(431.1)	(483.6)
age	-98.77***	-13.96	-51.55***	-95.53***	-17.35	-45.84***
	(24.21)	(17.76)	(17.04)	(23.29)	(16.80)	(16.86)
constant	5527.7***	3979.4**	6363.9***	8426.9***	4160.1***	6514.1***
	(2116.3)	(1805.3)	(1670.4)	(1333.5)	(1071.1)	(1018.9)
N	198	181	163	198	181	163
R-square	0.483	0.478	0.338	0.523	0.530	0.359
Adjusted R square	0.456	0.447	0.295	0.497	0.502	0.317
F	17.50***	15.57***	7.765***	20.47***	19.18***	8.511***

Standard errors in parentheses
* p <0.1 , ** p<0.05, *** p<0.01
Source: Calculated by authors

Table 43: Regression results for equation 8 (continued)

Dependent variable	Individual monthly income	Individual monthly income	Individual monthly income	Individual monthly income	Individual monthly income	Individual monthly income
Group	Self-employed	Wage-earner	Casual labour	Self-employed	Wage-earner	Casual labour
Relational SCI	742.6	-1066.0	922.9			
	(1863.8)	(1365.7)	(1422.1)			
(Affluence)*(Relational SCI)	4691.8***	2858.0***	1507.7***			
	(623.3)	(536.6)	(431.6)			
Cognitive SCI				-899.2	-1525.8	-2636.2*
				(2242.7)	(1686.2)	(1478.5)
(Affluence)*(Cognitive SCI)				4856.5***	2782.4***	1372.0***
				(670.8)	(571.2)	(465.8)
rural	-1668.1***	-238.4	-400.6	-1973.0***	-336.3	-607.7
	(536.5)	(500.2)	(455.9)	(536.0)	(506.3)	(377.8)
female	-4443.5***	-3590.2***	-2734.9***	-4830.0***	-3617.3***	-2640.6***
	(775.8)	(421.8)	(502.4)	(771.9)	(417.9)	(521.8)
schoolyear	96.40	22.08	123.8***	85.10	20.16	118.6***
	(60.71)	(45.64)	(43.26)	(61.74)	(46.39)	(43.49)
muslim	399.5	281.7	725.8**	419.4	228.5	735.4**
	(574.8)	(459.7)	(357.0)	(600.0)	(464.5)	(359.1)
SC	-448.2	1003.8**	890.7*	-490.9	960.5*	1034.1**
	(585.1)	(490.6)	(452.1)	(589.4)	(496.1)	(465.5)
OBC	-221.2	731.3	-6.665	-285.6	773.9	-27.87

	(659.2)	(555.8)	(439.9)	(668.2)	(559.3)	(438.5)
unmarried	-1537.8**	-615.9	-1025.7**	-1682.7**	-610.6	-913.0*
	(774.5)	(457.0)	(486.1)	(784.0)	(467.3)	(486.6)
age	-97.36***	-17.06	-48.77***	-106.6***	-14.86	-45.60**
	(25.68)	(18.08)	(17.28)	(25.84)	(18.14)	(17.83)
constant	9174.4***	6708.9***	6510.2***	11022.8***	7068.1***	9032.1***
	(2078.6)	(1471.0)	(1519.9)	(1892.8)	(1608.8)	(1146.9)
N	198	181	163	198	181	163
R-square	0.443	0.465	0.340	0.427	0.454	0.331
Adjusted R square	0.414	0.433	0.296	0.396	0.422	0.286
F	14.89***	14.76***	7.825***	13.93***	14.12***	7.505***

Standard errors in parentheses

* p <0.1 , ** p<0.05, *** p<0.01

Source: Calculated by authors

The effect of social capital on income as well as effect of socioeconomic condition on income gain from increasing social capital remains consistent with the previous results in general. For casual labour group, coefficient of cognitive social capital index is negative and significant but the magnitude is bigger than the positive and significant coefficient of the interaction term, resulting in a significant negative net effect of increasing social capital on income. Effect of other control variables remains consistent with previous results.

The third analysis is done across the genders. Equation 9 is run on male workers and female workers separately. The results are presented in Table 44.

$$(\text{Income})_i = d_{1i} + d_{11}(\text{Social capital index})_i + d_{12}(\text{Affluence})_i * (\text{Social capital index})_i + d_{13}(\text{rural})_i + d_{14}(\text{wage_earner})_i + d_{15}(\text{casual_labour})_i + d_{16}(\text{schoolyear})_i + d_{17}(\text{muslim})_i + d_{18}(\text{SC})_i + d_{19}(\text{OBC})_i + d_{10}(\text{unmarried})_i + d_{111}(\text{age})_i + e_{4i} \dots \dots \dots (9)$$

Table 44: Regression results for equation 9

Dependent variable	Individual monthly income	Individual monthly income	Individual monthly income	Individual monthly income	Individual monthly income	Individual monthly income	Individual monthly income	Individual monthly income
Group	Male	Female	Male	Female	Male	Female	Male	Female
Social capital index	1602.5***	378.5						
	(599.5)	(497.6)						
(Affluence)* (Social capital index)	1458.7***	713.3***						
	(153.5)	(163.7)						
Structural SCI			1918.9*	1423.1				

			(978.9)	(955.5)				
(Affluence)* (Structural SCI)			6292.4***	4411.2***				
			(592.5)	(763.1)				
Relational SCI					503.4	-1372.6		
					(1235.6)	(881.8)		
(Affluence)* (Relational SCI)					3637.4***	1565.0***		
					(390.5)	(409.7)		
Cognitive SCI							-1570.6	641.0
							(1384.2)	(1081.8)
(Affluence)* (Cognitive SCI)							3770.1***	1699.6***
							(429.6)	(402.1)
rural	-790.8**	1148.5***	-398.3	1221.0***	-1343.7***	919.1**	-1554.5***	995.2***
	(389.8)	(354.7)	(393.1)	(318.5)	(364.6)	(358.2)	(345.6)	(332.5)
wage_earner	-807.3**	218.1	-654.4*	285.2	-803.3**	194.1	-780.6*	226.2
	(390.4)	(340.5)	(376.8)	(321.6)	(398.5)	(345.6)	(405.6)	(342.1)
casual_labour	-157.5	610.0	-23.49	831.9*	-370.1	614.9	-370.7	569.0
	(341.5)	(479.0)	(330.2)	(453.8)	(345.1)	(488.3)	(352.9)	(487.2)
schoolyear	100.6***	37.88	86.04**	26.52	122.7***	38.90	114.0***	40.71
	(37.82)	(31.82)	(37.40)	(30.34)	(38.16)	(32.31)	(38.73)	(31.92)
muslim	454.4	290.8	475.3	310.9	389.9	268.5	373.4	269.3
	(344.8)	(302.5)	(332.7)	(283.5)	(352.0)	(308.3)	(360.0)	(304.4)
SC	421.6	318.2	550.3	408.3	487.2	279.0	471.8	233.8
	(395.4)	(283.1)	(381.1)	(265.8)	(403.3)	(289.7)	(409.5)	(287.2)
OBC	232.4	229.7	120.8	197.0	286.3	233.0	307.8	230.5
	(391.4)	(454.7)	(378.1)	(425.0)	(400.1)	(462.9)	(405.8)	(458.4)
unmarried	-1756.4***	114.1	-1706.3***	107.6	-1814.9***	90.26	-1876.7***	159.1
	(458.2)	(290.4)	(441.9)	(270.6)	(470.1)	(295.5)	(474.3)	(296.5)
age	-74.42***	-1.839	-69.16***	-3.854	-72.87***	-8.596	-77.77***	-2.776
	(14.85)	(13.70)	(14.34)	(12.72)	(15.50)	(14.15)	(15.76)	(13.77)
constant	5448.6***	859.0	7241.4***	997.1	8241.9***	2847.3***	10127.8***	1144.1
	(1432.1)	(1150.8)	(884.7)	(683.2)	(1346.3)	(980.0)	(1154.3)	(1009.9)
N	403	139	403	139	403	139	403	139
R-square	0.312	0.353	0.359	0.435	0.282	0.329	0.260	0.343
Adjusted R-square	0.292	0.297	0.341	0.386	0.262	0.271	0.239	0.287
F	16.10***	6.303***	19.87***	8.894***	13.98***	5.663***	12.49	6.040

Standard errors in parentheses

* p <0.1 , ** p<0.05, *** p<0.01

Source: Calculated by authors

The effect of social capital on income as well as effect of socioeconomic condition on income gain from increasing social capital. But coefficients of social capital indices are significant only in social capital index and structural social capital index models for male group. And the magnitude of coefficients for the interactive term is consistently higher for male workers, implying given similar socioeconomic condition, male workers gain more from social capital than female workers. Gender difference is evident regarding effect of other factors on income. In terms of income, while rural male workers are worse off, rural female workers are better off than their urban counterparts.

8.6.2. Discussion

The results reveal a consistent positive interaction of socioeconomic condition with individual social capital in enhancing income. Our results indicate that not only the impact of social capital on income is heavily influenced by existing socioeconomic condition of responder, social capital can even have detrimental effect on income if those conditions are not favorable. For example, in case of casual labours (equation 3) coefficient of cognitive social capital index is negative and coefficient of the interaction term is not enough to outweigh the former one. To comprehend these results, we must understand that maintaining and increasing social capital are not free of cost. Creating new connections personally or through group-membership, maintaining existing connections (that they remain good enough to be helpful in need) and socializing have their own cost in terms of time and money. The effective cost of investing an hour or a Rs. 100 to increase social capital will be higher for a person who earns lesser or works longer hours to compensate for lower hourly wage-rate. Because their marginal benefit of an additional unit of money/time will be higher than someone with more income and/or hours at disposal. Therefore, one's existing income needs to be high enough to allow them to invest enough in social capital so that the return from increased social capital can outweigh the cost incurred to increase social capital (Growiec and Growiec, 2014).

The effects of other demographic factors of informal workers in determining income are mostly expected. Women workers are worse off than their male counterpart in terms of income which is evident across all models from first three equations. The fourth set of equations reveals that given both are at same socioeconomic level of affluence, social capital is likely to add more income for a male responder than for a female responder. Income is likely to be lower for older and unmarried responders and higher for responders with more years of formal schooling. For the present group of responders, Muslim and SC informal workers are likely to have higher income than their Hindu and

general caste counterparts respectively. For Muslim workers the effects are significant in urban area and casual labour force. For SC workers the difference is more pronounced in rural area, and for wage-earner and casual labour force. While this may indicate the improving economic condition of minority population of the localities, this may also be result of professional ghettoization of minority communities over generations in the informal sector of these areas and no conclusion can be drawn without generational data on their socioeconomic mobility and information on the formal sector workers of the same areas.

Our study attempts to address the two-way causality of social capital and income by incorporating an explanatory variable for interaction between social capital and socioeconomic affluence. But using OLS method does not remove the problem of endogeneity, i.e. the coefficients of social capital are likely to have upward biases. Moreover, the composite social capital index considered here can theoretically take the maximum value of 3 since it is the sum of three normalized sub-indices. So an increase in the composite index value by 1 is a rather large increase by around one third of its possible range. Therefore, impact of a marginal increase in individual social capital on income will be much lesser than the coefficients. Hence the coefficients overestimate the impact of social capital to improve income (and poverty alleviation) and the implications of these results are limited to establish the two-way causality between social capital and income only.

8.7. Conclusion

The two objectives of this chapter were constructing an individual-level social capital index for informal workers and investigating the effect of social capital index on their income. In the first part, social capital of the present group of informal workers has been measured using the structural-relational-cognitive framework and an individual-level composite social capital index along with the three sub-indices- structural, relational and cognitive social capital index, are constructed. In the second part, effect of social capital on responder's income is investigated for the composite social capital index as well as for the three sub-indices across different groups. The findings consistently suggest that impact of social capital indices on income heavily depends on the existing socioeconomic condition for the present group of informal workers. While increase in social capital generally tends to enhance income for workers, income gain from same amount of social capital is much higher for

workers with better socioeconomic condition. Among important observation is the gender disparity of income where women workers' income is substantially lower across all groups and all types of work.

The main contribution of this analysis is that it affirms the presence of a reverse-causality where social capital or rather the functions of social capital as a tool of development are impacted and limited by the stage of development itself. Hence the optimistic view of social capital as the poor people's access to 'capital' can be misleading because it indicates a possible substitutability of social capital with economic or human capital and misinterprets *surviving through poverty* as *getting out of poverty*. Social capital is understood in economic discourse as the intangible elements that get generated from the existing social structure and relationship networks, often historically, and facilitate an individual or community towards economic development. Since social capital cannot be measured directly, the structural elements are used as proxy measures. But social structure exists naturally with no particular purpose of economic development; it co-exists with economic system and they keep influencing each other in every direction. Treating social capital as similar to economic capital or an alternative measure of wellbeing automatically assumes away the possible negative effects of many structural elements commonly used as social capital measures on economic and social well-being, like exploitation and exclusion of fellow citizens through resourceful contacts, obligatory socializing with abusive relatives or community and conforming to harmful social norm or blind trust on corrupt institutions. Hence this paper suggests that a more realistic way to approach the question of social capital as a tool of development will be focusing on specific aspects of a social system and studying their interactions with the development processes to come up with viable policy suggestions.

Chapter 9: Relationship between Subjective Well-Being, Decent Work and Social Capital

So far we have considered overall well-being, quality of work and state of social capital of a responder separately. In this chapter we attempt to understand how they are related to each other, if at all. In the first part we check if there is any correlation present among the indices and whether a responder scoring high in one index scores high in other indices as well. In the second part we check whether good quality of work and social capital also contribute to good state of overall well-being.

9.1. Relationship among the three indices

Correlation among the indices reveals that all indices are positively correlated with each other, but the correlation is strongest between decent work index and social capital index. Table 45 presents the correlation values.

Table 45: Correlation among the three indices

	Subjective well-being index	Decent work index	Social capital index
Subjective well-being index	1.0000		
Decent work index	0.0216	1.0000	
Social capital index	0.0255	0.4390	1.0000

Source: calculated by author

To get a better idea we plot the quartile variables of the indices against each other. We try to check if an individual with high score in one index reports high values in other indices as well. For that, we create quartile variables of the indices. Quartile variables take discreet categorical values representing the number of quartiles (four in this case). For instance, index value belonging to fourth quartile takes the value 4 and so on. Figure 4-6 presents the plots.

Figure 4: Quartile variable plot for SWB and DWI

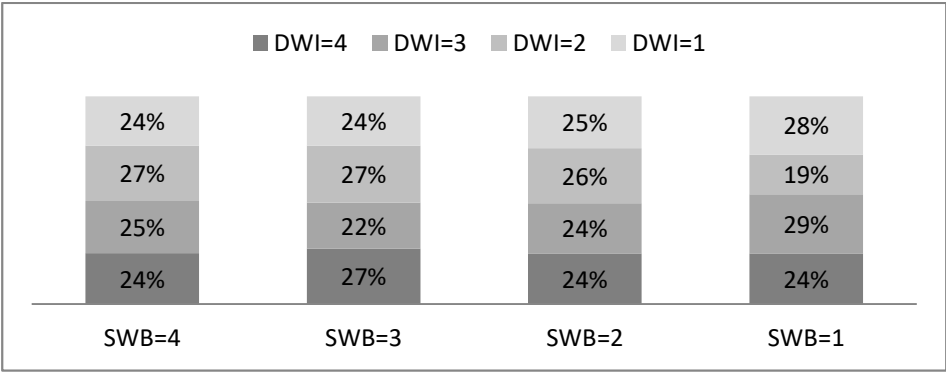


Figure 5: Quartile variable plot for SWB and SCI

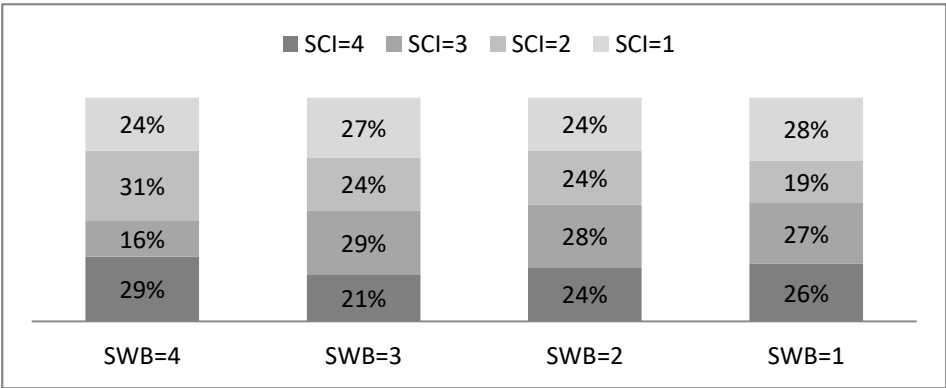
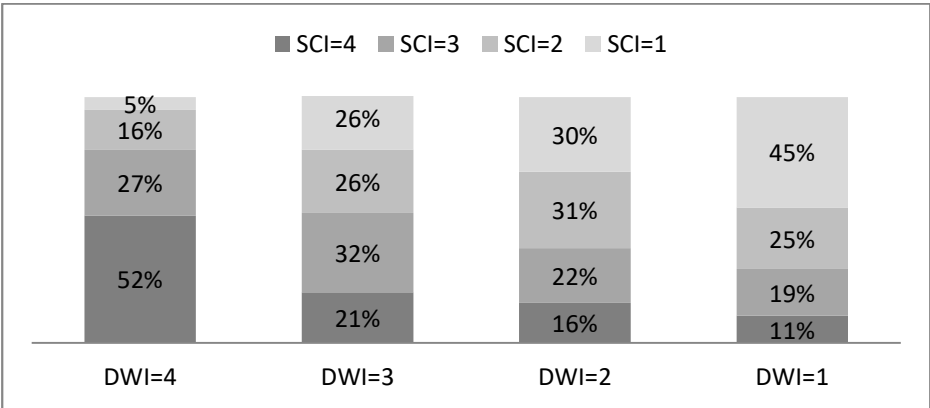


Figure 6: Quartile variable plot for DWI and SCI



The plots are consistent with the previous correlation analysis. Only in case of DWI and SCI we see values belonging to higher quartile of DWI have associated values of SCI belonging to higher quartile.

For other two cases we don't find any pattern. The quartile plots and the correlation matrix indicate that while good quality of work is associated with high social capital, there is not much strong association of them with good state of overall well-being for this group of responders.

9.2. Impact of decent work and social capital on subjective well-being

In this part we have tried to see whether decent work and social capital contribute to subjective well-being of a responder. For doing this, we have considered the previous model of investigating the relationship of subjective well-being with other relevant socio-economic factors and checked whether adding decent work and social capital as additional explanatory variables improve the explanatory power of the model. Since decent work and social capital show high correlation between them, they are not incorporated in the same model to avoid multicollinearity. The modified versions of equation 1 (from Chapter 6) are given below where decent work index and social capital index are added with the previous explanatory variables.

Equation 10 for i-th responder (with decent work index as added variable):

$$I_{WBi} = a + a_1(\text{decent work index})_i + b_1 \ln(\text{income})_i + c_1(\text{age})_i + c_2(\text{schoolyear})_i + c_3(\text{unmarried})_i + c_4(\text{religious_participation})_i + c_5(\text{asset_holding})_i + c_6(\text{muslim})_i + c_7(\text{SC})_i + c_8(\text{OBC})_i + c_9(\text{female})_i + c_{10}(\text{rural})_i + c_{11}(\text{selfemployed})_i + c_{12}(\text{casual_labour})_i + c_{13}(\text{rural*female})_i + c_{14}(\text{rural*selfemployed})_i + c_{15}(\text{rural*casual_labour})_i + c_{16}(\text{female*selfemployed})_i + c_{17}(\text{female*casual_labour})_i + c_{18}(\text{muslim*SC})_i + c_{19}(\text{muslim*OBC})_i + c_{20}(\text{asset_holding*having_sss})_i + e_i$$

Equation 11 for i-th responder (with social capital index as added variable):

$$I_{WBi} = a + a_2(\text{social capital index})_i + b_1 \ln(\text{income})_i + c_1(\text{age})_i + c_2(\text{schoolyear})_i + c_3(\text{unmarried})_i + c_4(\text{religious_participation})_i + c_5(\text{asset_holding})_i + c_6(\text{muslim})_i + c_7(\text{SC})_i + c_8(\text{OBC})_i + c_9(\text{female})_i + c_{10}(\text{rural})_i + c_{11}(\text{selfemployed})_i + c_{12}(\text{casual_labour})_i + c_{13}(\text{rural*female})_i + c_{14}(\text{rural*selfemployed})_i + c_{15}(\text{rural*casual_labour})_i + c_{16}(\text{female*selfemployed})_i + c_{17}(\text{female*casual_labour})_i + c_{18}(\text{muslim*SC})_i + c_{19}(\text{muslim*OBC})_i + c_{20}(\text{asset_holding*having_sss})_i + e_i$$

Since we are considering overall well-being, only SWB has been used for I_{WBi} . Table 46 presents the comparison between the regression results of equation 1 with the new modified versions (model 10 and 11) with additional variables.

Table 46: Comparison among model 1, model 10 and model 11 (combined models)

Dependent variable: Subjective well-being index	Individual income (1A)	Individual income (10A)	Individual income (11B)	Household percapita income (1B)	Household percapita income (10B)	Household percapita income (11B)
Decent work index		0.0251 (0.0222)			0.0276 (0.0214)	
Social capital index			0.165*** (0.0568)			0.164*** (0.0558)
ln(Individual income)	0.120*** (0.0264)	0.110*** (0.0278)	0.103*** (0.0268)			
ln(household percapita income)				0.167*** (0.0298)	0.158*** (0.0305)	0.152*** (0.0300)
age	-0.000677 (0.00142)	-0.000640 (0.00142)	-0.000496 (0.00141)	-0.000845 (0.00139)	-0.000746 (0.00139)	-0.000586 (0.00138)
schoolyear	-0.00290 (0.00348)	-0.00325 (0.00349)	-0.00431 (0.00349)	-0.00184 (0.00341)	-0.00237 (0.00344)	-0.00345 (0.00343)
female	0.0201 (0.0609)	0.00580 (0.0622)	0.0402 (0.0609)	-0.0568 (0.0547)	-0.0640 (0.0550)	-0.0243 (0.0554)
unmarried	-0.0262 (0.0390)	-0.0237 (0.0391)	-0.0207 (0.0388)	-0.0567 (0.0382)	-0.0514 (0.0384)	-0.0472 (0.0380)
religious_participation	-0.0187 (0.0367)	-0.0237 (0.0369)	-0.0500 (0.0380)	-0.0334 (0.0364)	-0.0381 (0.0366)	-0.0631* (0.0375)
muslim	-0.0698* (0.0379)	-0.0659* (0.0381)	-0.0730* (0.0377)	-0.0673* (0.0375)	-0.0634* (0.0376)	-0.0711* (0.0373)
SC	-0.0270 (0.0386)	-0.0240 (0.0386)	-0.0320 (0.0383)	-0.00144 (0.0383)	0.000189 (0.0383)	-0.00900 (0.0381)
OBC	0.0246 (0.0506)	0.0216 (0.0507)	0.0166 (0.0504)	0.00105 (0.0504)	-0.00107 (0.0504)	-0.00502 (0.0500)
muslim*SC	0.0168 (0.0807)	0.0103 (0.0809)	0.0200 (0.0802)	-0.00102 (0.0800)	-0.00719 (0.0801)	0.00378 (0.0794)
muslim*OBC	-0.0508 (0.0817)	-0.0531 (0.0817)	-0.0505 (0.0811)	-0.0113 (0.0811)	-0.0161 (0.0811)	-0.0148 (0.0805)
rural	0.131* (0.0740)	0.137* (0.0741)	0.174** (0.0749)	0.147** (0.0734)	0.154** (0.0735)	0.190** (0.0743)
rural*female	-0.0924	-0.0769	-0.0837	-0.0942	-0.0796	-0.0887

	(0.0836)	(0.0846)	(0.0830)	(0.0824)	(0.0831)	(0.0818)
rural*selfemployed	0.113	0.110	0.104	0.107	0.103	0.0977
	(0.0804)	(0.0805)	(0.0799)	(0.0797)	(0.0797)	(0.0791)
rural*casual_labour	0.0279	0.0334	0.0365	0.0543	0.0585	0.0601
	(0.0835)	(0.0836)	(0.0830)	(0.0827)	(0.0827)	(0.0821)
asset_holding	0.0957**	0.0951*	0.0920*	0.0946**	0.0932*	0.0899*
	(0.0487)	(0.0487)	(0.0483)	(0.0481)	(0.0481)	(0.0478)
asset_holding* having_sss	-0.0273	-0.0360	-0.0366	-0.0449	-0.0533	-0.0524
	(0.0364)	(0.0372)	(0.0363)	(0.0361)	(0.0367)	(0.0359)
selfemployed	-0.0849*	-0.0815*	-0.0836*	-0.0711	-0.0685	-0.0716
	(0.0476)	(0.0476)	(0.0472)	(0.0470)	(0.0471)	(0.0467)
casual_labour	-0.118**	-0.118**	-0.108**	-0.130**	-0.131**	-0.120**
	(0.0528)	(0.0527)	(0.0525)	(0.0524)	(0.0523)	(0.0521)
female*selfemployed	0.118	0.120	0.106	0.0898	0.0947	0.0817
	(0.0856)	(0.0856)	(0.0851)	(0.0844)	(0.0844)	(0.0838)
female*casual_labour	0.178*	0.175*	0.152	0.193*	0.189*	0.166
	(0.103)	(0.103)	(0.102)	(0.102)	(0.102)	(0.101)
constant	1.854***	1.862***	1.690***	1.599***	1.583***	1.407***
	(0.252)	(0.252)	(0.256)	(0.252)	(0.253)	(0.259)
N	542	542	542	542	542	542
R ²	0.145	0.147	0.159	0.162	0.165	0.176
F	4.209***	4.078***	4.460***	4.786***	4.649***	5.030***
Standard errors in parentheses						
* p <0.1 , ** p<0.05, *** p<0.01						

Source: Calculated by authors

For the combined models, the impact of decent work on subjective well-being is insignificant but impact of social capital is positive and significant. Effect of other factors remains more or less unchanged. R² values of modified models are higher than previous model and more for model 11 with social capital

The same exercise is repeated across work categories (model 12 and 13).

Equation 12 for i-th responder (with decent work index as added variable):

$$I_{WBi} = a + a_1(\text{decent work index})_i + b_1 \ln(\text{income})_i + c_1(\text{age})_i + c_2(\text{schoolyear})_i + c_3(\text{unmarried})_i + c_4(\text{religious_participation})_i + c_5(\text{asset_holding})_i + c_6(\text{muslim})_i + c_7(\text{SC})_i + c_8(\text{OBC})_i + c_9(\text{female})_i + c_{10}(\text{rural})_i + c_{13}(\text{rural} * \text{female})_i + c_{18}(\text{muslim} * \text{SC})_i + c_{19}(\text{muslim} * \text{OBC})_i + c_{20}(\text{asset_holding} * \text{having_sss})_i + e_i$$

Equation 13 for i-th responder (with social capital index as added variable):

$$I_{WBi} = a + a_2(\text{social capital index})_i + b_1 \ln(\text{income})_i + c_1(\text{age})_i + c_2(\text{schoolyear})_i + c_3(\text{unmarried})_i + c_4(\text{religious_participation})_i + c_5(\text{asset_holding})_i + c_6(\text{muslim})_i + c_7(\text{SC})_i + c_8(\text{OBC})_i + c_9(\text{female})_i + c_{10}(\text{rural})_i + c_{13}(\text{rural} * \text{female})_i + c_{18}(\text{muslim} * \text{SC})_i + c_{19}(\text{muslim} * \text{OBC})_i + c_{20}(\text{asset_holding} * \text{having_sss})_i + e_i$$

Table 47-50 present the comparison between the regression results of model 3 (from chapter 6) and the new modified versions (model 12 and 13) with additional variables. Table 47-48 present the comparison between the results of model 3 and model 12.

Table 47: Comparison among model 2 and model 12(with decent work index)-across work categories

Dependent variable: Subjective well-being index	Individual income (2A-1)	Individual income (12A-1)	Individual income (2A-2)	Individual income (12A-2)
	SE	SE	WE	WE
Decent work index		-0.00959 (0.0312)		0.0427 (0.0455)
ln(Individual income)	0.135*** (0.0412)	0.140*** (0.0450)	0.109** (0.0430)	0.0955** (0.0453)
age	0.00216 (0.00244)	0.00207 (0.00246)	-0.00425* (0.00239)	-0.00431* (0.00239)
schoolyear	0.00365 (0.00574)	0.00386 (0.00580)	-0.00420 (0.00615)	-0.00443 (0.00616)
female	0.164* (0.0944)	0.169* (0.0962)	-0.0312 (0.0846)	-0.0553 (0.0884)
unmarried	0.0330 (0.0741)	0.0298 (0.0751)	-0.0365 (0.0605)	-0.0329 (0.0606)
religious_participation	0.000511	0.00274	-0.0945	-0.103

	(0.0549)	(0.0555)	(0.0618)	(0.0624)
muslim	-0.0712	-0.0719	-0.0947	-0.0888
	(0.0628)	(0.0630)	(0.0720)	(0.0723)
SC	-0.0924	-0.0935	0.0776	0.0794
	(0.0594)	(0.0596)	(0.0672)	(0.0672)
OBC	-0.0348	-0.0319	0.0840	0.0757
	(0.0747)	(0.0754)	(0.100)	(0.100)
muslim*SC	0.116	0.118	-0.0647	-0.0775
	(0.119)	(0.119)	(0.193)	(0.194)
muslim*OBC	0.0638	0.0632	-0.0846	-0.0789
	(0.142)	(0.143)	(0.146)	(0.146)
rural	0.303***	0.235***	0.142	0.0742
	(0.100)	(0.0613)	(0.0862)	(0.105)
rural*female	-0.0598	0.0344	-0.0306	-0.0752
	(0.0589)	(0.162)	(0.0624)	(0.139)
asset_holding	0.237***	0.304***	0.0714	0.140
	(0.0609)	(0.101)	(0.105)	(0.0863)
asset_holding*having_sss	0.0344	-0.0563	-0.111	-0.0368
	(0.162)	(0.0602)	(0.133)	(0.0628)
constant	1.300***	1.282***	2.102***	2.093***
	(0.414)	(0.419)	(0.415)	(0.416)
N	198	198	181	181
R ²	0.232	0.232	0.187	0.191
F	3.666***	3.426***	2.527***	2.423***

Standard errors in parentheses

* p <0.1 , ** p<0.05, *** p<0.01

Source: Calculated by authors

Table 48: Comparison among model 2 and model 12(with decent work index)-across work categories (continued)

Dependent variable:	Household	Household	Household	Household	Household	Household
Subjective well-being index	percapita income (2B-1)	percapita income (12B-1)	percapita income (2B-2)	percapita income (12B-2)	percapita income (2B-3)	percapita income (12B-3)
	SE	SE	WE	WE	CL	CL
Decent work index		0.00188		0.0433		0.0570

		(0.0299)		(0.0447)		(0.0512)
ln(household percapita income)	0.150***	0.149***	0.144***	0.130**	0.219***	0.219***
	(0.0455)	(0.0476)	(0.0520)	(0.0540)	(0.0676)	(0.0675)
age	0.000297	0.000331	-0.00373	-0.00381	0.00120	0.000939
	(0.00231)	(0.00238)	(0.00242)	(0.00242)	(0.00273)	(0.00274)
schoolyear	0.00542	0.00536	-0.00365	-0.00397	-0.00601	-0.00672
	(0.00567)	(0.00576)	(0.00611)	(0.00612)	(0.00685)	(0.00688)
female	0.0552	0.0551	-0.123*	-0.135*	0.149	0.129
	(0.0814)	(0.0816)	(0.0676)	(0.0688)	(0.165)	(0.166)
unmarried	-0.0474	-0.0462	-0.0384	-0.0341	-0.0413	-0.0490
	(0.0710)	(0.0739)	(0.0601)	(0.0603)	(0.0768)	(0.0771)
religious_participation	-0.000353	-0.000822	-0.124**	-0.128**	0.108	0.0891
	(0.0549)	(0.0556)	(0.0608)	(0.0610)	(0.0864)	(0.0880)
muslim	-0.0873	-0.0871	-0.0840	-0.0793	-0.0588	-0.0428
	(0.0627)	(0.0630)	(0.0716)	(0.0718)	(0.0675)	(0.0690)
SC	-0.0982*	-0.0980	0.117*	0.115*	-0.0251	-0.0113
	(0.0592)	(0.0595)	(0.0675)	(0.0676)	(0.0809)	(0.0818)
OBC	-0.0536	-0.0541	0.0558	0.0496	-0.00602	0.00953
	(0.0746)	(0.0752)	(0.101)	(0.101)	(0.0969)	(0.0978)
muslim*SC	0.134	0.134	-0.102	-0.112	-0.0642	-0.0808
	(0.119)	(0.119)	(0.193)	(0.194)	(0.138)	(0.139)
muslim*OBC	0.0859	0.0858	-0.0404	-0.0385	-0.0553	-0.0896
	(0.142)	(0.142)	(0.147)	(0.147)	(0.151)	(0.154)
rural	0.272***	0.258***	0.157*	0.0791	-0.0483	0.387***
	(0.101)	(0.0617)	(0.0854)	(0.104)	(0.0751)	(0.0955)
rural*female	-0.0785	-0.0642	-0.0364	-0.0575	-0.0431	-0.0286
	(0.0590)	(0.166)	(0.0622)	(0.133)	(0.0739)	(0.186)
asset_holding	0.257***	0.272***	0.0751	0.152*	0.374***	-0.0439
	(0.0613)	(0.101)	(0.104)	(0.0855)	(0.0948)	(0.0751)
asset_holding*having_sss	-0.0647	-0.0790	-0.0888	-0.0422	-0.0567	-0.0716
	(0.165)	(0.0598)	(0.129)	(0.0625)	(0.185)	(0.0782)
constant	1.415***	1.416***	1.889***	1.877***	0.973*	0.819
	(0.378)	(0.379)	(0.454)	(0.455)	(0.559)	(0.576)
N	198	198	181	181	163	163
R ²	0.233	0.233	0.193	0.198	0.169	0.176

F 3.685*** 3.436*** 2.631*** 2.524*** 1.999** 1.954**

Standard errors in parentheses

* p <0.1 , ** p<0.05, *** p<0.01

Source: Calculated by authors

Table 49-50 present the comparison between the results of model 3 and model 12.

Table 49: Comparison among model 2 and model 13 (with social capital index) -across work categories

Dependent variable:	Individual income	Individual income	Individual income	Individual income
Subjective well-being index	(2A-1)	(13A-1)	(2A-2)	(13A-2)
	SE	SE	WE	WE
Social capital index		0.116 (0.0897)		0.192* (0.0990)
ln(Individual income)	0.135*** (0.0412)	0.119*** (0.0429)	0.109** (0.0430)	0.0909** (0.0437)
age	0.00216 (0.00244)	0.00215 (0.00243)	-0.00425* (0.00239)	-0.00399* (0.00238)
schoolyear	0.00365 (0.00574)	0.00191 (0.00588)	-0.00420 (0.00615)	-0.00567 (0.00615)
female	0.164* (0.0944)	0.160* (0.0943)	-0.0312 (0.0846)	-0.000397 (0.0854)
unmarried	0.0330 (0.0741)	0.0312 (0.0740)	-0.0365 (0.0605)	-0.0217 (0.0605)
religious_participation	0.000511 (0.0549)	-0.0269 (0.0588)	-0.0945 (0.0618)	-0.122* (0.0629)
muslim	-0.0712 (0.0628)	-0.0723 (0.0627)	-0.0947 (0.0720)	-0.0998 (0.0714)
SC	-0.0924 (0.0594)	-0.0983* (0.0594)	0.0776 (0.0672)	0.0826 (0.0667)
OBC	-0.0348 (0.0747)	-0.0466 (0.0751)	0.0840 (0.100)	0.0888 (0.0992)
muslim*SC	0.116 (0.119)	0.117 (0.119)	-0.0647 (0.193)	-0.0622 (0.192)
muslim*OBC	0.0638 (0.142)	0.0801 (0.143)	-0.0846 (0.146)	-0.106 (0.145)
rural	0.303*** (0.100)	0.256*** (0.0625)	0.142 (0.0862)	0.130 (0.108)

rural*female	-0.0598 (0.0589)	0.0409 (0.162)	-0.0306 (0.0624)	-0.111 (0.132)
asset_holding	0.237*** (0.0609)	0.280*** (0.102)	0.0714 (0.105)	0.157* (0.0858)
asset_holding*having_sss	0.0344 (0.162)	-0.0620 (0.0589)	-0.111 (0.133)	-0.0463 (0.0624)
constant	1.300*** (0.414)	1.258*** (0.414)	2.102*** (0.415)	1.870*** (0.429)
N	198	198	181	181
R ²	0.232	0.239	0.187	0.205
F	3.666***	3.555***	2.527***	2.643***
Standard errors in parentheses				
* p <0.1 , ** p<0.05, *** p<0.01				
Source: Calculated by authors				

Table 50: Comparison among model 2 and model 13(with social capital index) -across work categories (continued)

Dependent variable: Subjective well-being index	Household percapita income (2B- 1) SE	Household percapita income (13B-1) SE	Household percapita income (2B-2) WE	Household percapita income (13B-2) WE	Household percapita income (2B-3) CL	Household percapita income (13B-3) CL
Social capital index		0.131 (0.0879)		0.189* (0.0984)		0.202* (0.119)
ln(household percapita income)	0.150*** (0.0455)	0.135*** (0.0465)	0.144*** (0.0520)	0.124** (0.0526)	0.219*** (0.0676)	0.227*** (0.0673)
age	0.000297 (0.00231)	0.000560 (0.00231)	-0.00373 (0.00242)	-0.00352 (0.00240)	0.00120 (0.00273)	0.00151 (0.00272)
schoolyear	0.00542 (0.00567)	0.00318 (0.00584)	-0.00365 (0.00611)	-0.00520 (0.00611)	-0.00601 (0.00685)	-0.00663 (0.00682)
female	0.0552 (0.0814)	0.0665 (0.0815)	-0.123* (0.0676)	-0.0769 (0.0712)	0.149 (0.165)	0.132 (0.164)
unmarried	-0.0474 (0.0710)	-0.0391 (0.0710)	-0.0384 (0.0601)	-0.0231 (0.0601)	-0.0413 (0.0768)	-0.0407 (0.0763)
religious_participation	-0.000353	-0.0316	-0.124**	-0.146**	0.108	0.0667

	(0.0549)	(0.0586)	(0.0608)	(0.0614)	(0.0864)	(0.0892)
muslim	-0.0873	-0.0867	-0.0840	-0.0907	-0.0588	-0.0727
	(0.0627)	(0.0625)	(0.0716)	(0.0711)	(0.0675)	(0.0676)
SC	-0.0982*	-0.104*	0.117*	0.116*	-0.0251	-0.0513
	(0.0592)	(0.0591)	(0.0675)	(0.0670)	(0.0809)	(0.0818)
OBC	-0.0536	-0.0647	0.0558	0.0640	-0.00602	-0.0282
	(0.0746)	(0.0747)	(0.101)	(0.100)	(0.0969)	(0.0972)
muslim*SC	0.134	0.134	-0.102	-0.0948	-0.0642	-0.0450
	(0.119)	(0.118)	(0.193)	(0.192)	(0.138)	(0.138)
muslim*OBC	0.0859	0.101	-0.0404	-0.0668	-0.0553	-0.0363
	(0.142)	(0.142)	(0.147)	(0.146)	(0.151)	(0.150)
rural	0.272***	0.277***	0.157*	0.134	-0.0483	0.436***
	(0.101)	(0.0625)	(0.0854)	(0.108)	(0.0751)	(0.101)
rural*female	-0.0785	-0.0478	-0.0364	-0.0943	-0.0431	-0.0264
	(0.0590)	(0.165)	(0.0622)	(0.128)	(0.0739)	(0.185)
asset_holding	0.257***	0.248**	0.0751	0.169**	0.374***	-0.0558
	(0.0613)	(0.102)	(0.104)	(0.0849)	(0.0948)	(0.0747)
asset_holding*	-0.0647	-0.0787	-0.0888	-0.0512	-0.0567	-0.0581
having_sss						
	(0.165)	(0.0588)	(0.129)	(0.0622)	(0.185)	(0.0740)
constant	1.415***	1.317***	1.889***	1.669***	0.973*	0.561
	(0.378)	(0.382)	(0.454)	(0.465)	(0.559)	(0.607)
N	198	198	181	181	163	163
R ²	0.233	0.242	0.193	0.211	0.169	0.185
F	3.685***	3.616***	2.631***	2.737***	1.999**	2.076**

Standard errors in parentheses

* p <0.1 , ** p<0.05, *** p<0.01

Source: Calculated by authors

Consistent with previous results, the impact of decent work is insignificant for all the three work categories and impact of social capital is positive and significant for wage-earners and casual labours (13A-2, 13B-2 and 13B-3). Impact of income and other factors remains more or less the same except for some occasional changes in level of significance. For instance, in the modified models asset holding now has a significant positive impact for wage earners (12B-2, 13A-2, 13B-2) but not

anymore for casual labours (12B-3, 13B-3). But such changes do not alter the previous pattern of findings.

Lastly we have considered the modified models across residing areas.

Equation 14 for i-th responder (with decent work index as added variable):

$$I_{WBi} = a + a_1(\text{decent work index})_i + b_1 \ln(\text{income})_i + c_1(\text{age})_i + c_2(\text{schoolyear})_i + c_3(\text{unmarried})_i + c_4(\text{religious_participation})_i + c_5(\text{asset_holding})_i + c_6(\text{muslim})_i + c_7(\text{SC})_i + c_8(\text{OBC})_i + c_9(\text{female})_i + c_{11}(\text{selfemployed})_i + c_{12}(\text{casual_labour})_i + c_{16}(\text{female*selfemployed})_i + c_{17}(\text{female*casual_labour})_i + c_{18}(\text{muslim*SC})_i + c_{19}(\text{muslim*OBC})_i + c_{20}(\text{asset_holding*having_sss})_i + e_i$$

Equation 15 for i-th responder (with social capital index as added variable):

$$I_{WBi} = a + a_2(\text{social capital index})_i + b_1 \ln(\text{income})_i + c_1(\text{age})_i + c_2(\text{schoolyear})_i + c_3(\text{unmarried})_i + c_4(\text{religious_participation})_i + c_5(\text{asset_holding})_i + c_6(\text{muslim})_i + c_7(\text{SC})_i + c_8(\text{OBC})_i + c_9(\text{female})_i + c_{11}(\text{selfemployed})_i + c_{12}(\text{casual_labour})_i + c_{16}(\text{female*selfemployed})_i + c_{17}(\text{female*casual_labour})_i + c_{18}(\text{muslim*SC})_i + c_{19}(\text{muslim*OBC})_i + c_{20}(\text{asset_holding*having_sss})_i + e_i$$

Table 51-52 present the comparison between the regression results of model 3 and the new modified versions (model 14 and 15) with additional variables . Table 51 presents the comparison between the regression results of model 3 and model 14.

Table 51: Comparison among model 3 and model 14 (with decent work index) -across residing areas

Dependent variable: Subjective well-being index	Individual income (3A-1)	Individual income (14A-1)	Individual income (3A-2)	Individual income (14A-2)	Household percapita income (3B-1)	Household percapita income (14B-1)	Household percapita income (3B-2)	Household percapita income (14B-2)
	Urban	Urban	Rural	Rural	Urban	Urban	Rural	Rural
Decent work index		0.0237		-0.00630		0.0269		-0.00118
		(0.0287)		(0.0344)		(0.0275)		(0.0343)
ln(Individual income)	0.141***	0.130***	0.0233	0.0242				
	(0.0330)	(0.0356)	(0.0474)	(0.0478)				
ln(household					0.182***	0.171***	0.0613	0.0611

percapita income)					(0.0361)	(0.0377)	(0.0600)	(0.0605)
age	0.000163 (0.00179)	0.000184 (0.00179)	-0.00237 (0.00223)	-0.00236 (0.00223)	-0.000128 (0.00175)	-0.0000346 (0.00175)	-0.00236 (0.00219)	-0.00236 (0.00220)
schoolyear	-0.00473 (0.00464)	-0.00478 (0.00464)	0.00534 (0.00517)	0.00557 (0.00534)	-0.00320 (0.00453)	-0.00345 (0.00454)	0.00535 (0.00515)	0.00539 (0.00533)
female	0.0669 (0.0731)	0.0498 (0.0760)	-0.0583 (0.0822)	-0.0596 (0.0827)	-0.0365 (0.0640)	-0.0452 (0.0646)	-0.0712 (0.0824)	-0.0715 (0.0829)
unmarried	0.0239 (0.0475)	0.0261 (0.0476)	-0.250*** (0.0731)	-0.251*** (0.0734)	-0.0134 (0.0462)	-0.00758 (0.0466)	-0.255*** (0.0726)	-0.256*** (0.0729)
religious_participation	0.0106 (0.0432)	0.00528 (0.0437)	-0.266*** (0.0808)	-0.266*** (0.0810)	-0.00110 (0.0429)	-0.00648 (0.0432)	-0.276*** (0.0788)	-0.276*** (0.0790)
muslim	-0.0999* (0.0518)	-0.0939* (0.0523)	-0.0592 (0.0520)	-0.0593 (0.0521)	-0.0960* (0.0512)	-0.0896* (0.0516)	-0.0626 (0.0517)	-0.0625 (0.0519)
SC	-0.0129 (0.0532)	-0.0100 (0.0534)	-0.0256 (0.0535)	-0.0262 (0.0537)	0.0150 (0.0531)	0.0169 (0.0531)	-0.0220 (0.0524)	-0.0220 (0.0526)
OBC	0.0411 (0.0620)	0.0381 (0.0621)	-0.1000 (0.0913)	-0.101 (0.0916)	0.00310 (0.0618)	0.00188 (0.0618)	-0.0957 (0.0903)	-0.0958 (0.0906)
muslim*SC	0.141 (0.185)	0.143 (0.185)	-0.0104 (0.0847)	-0.00877 (0.0853)	0.133 (0.183)	0.136 (0.183)	-0.0141 (0.0845)	-0.0138 (0.0852)
muslim*OBC	0.0480 (0.118)	0.0444 (0.118)	-0.0720 (0.115)	-0.0704 (0.116)	0.104 (0.117)	0.0963 (0.117)	-0.0707 (0.115)	-0.0705 (0.115)
asset_holding	0.142** (0.0618)	0.143** (0.0618)	-0.120 (0.0765)	-0.120 (0.0767)	0.136** (0.0611)	0.137** (0.0612)	-0.113 (0.0766)	-0.113 (0.0768)
asset_holding* having_sss	-0.0276 (0.0479)	-0.0371 (0.0492)	-0.0465 (0.0538)	-0.0449 (0.0547)	-0.0374 (0.0474)	-0.0476 (0.0485)	-0.0595 (0.0541)	-0.0592 (0.0550)
selfemployed	-0.0690 (0.0541)	-0.0674 (0.0542)	0.0553 (0.0643)	0.0548 (0.0645)	-0.0614 (0.0535)	-0.0603 (0.0536)	0.0605 (0.0625)	0.0605 (0.0627)
casual_labour	-0.0961 (0.0601)	-0.0974 (0.0602)	-0.0644 (0.0650)	-0.0659 (0.0657)	-0.113* (0.0596)	-0.113* (0.0596)	-0.0599 (0.0637)	-0.0601 (0.0642)
female* selfemployed	0.0697 (0.107)	0.0782 (0.108)	0.0658 (0.149)	0.0681 (0.150)	0.0722 (0.106)	0.0822 (0.107)	0.0305 (0.140)	0.0307 (0.141)
female* casual_labour	0.150	0.148	0.145	0.146	0.127	0.124	0.149	0.149

	(0.189)	(0.189)	(0.111)	(0.111)	(0.187)	(0.187)	(0.110)	(0.110)
constant	1.554***	1.577***	3.060***	3.068***	1.372***	1.370***	2.786***	2.790***
	(0.316)	(0.317)	(0.424)	(0.428)	(0.307)	(0.307)	(0.480)	(0.498)
N	346	346	196	196	346	346	196	196
R ²	0.108	0.110	0.212	0.212	0.126	0.129	0.216	0.216
F	2.336***	2.242***	2.821***	2.652***	2.785***	2.683***	2.881***	2.706***
Standard errors in parentheses								
* p <0.1 , ** p<0.05, *** p<0.01								
Source: Calculated by authors								

Table 52 presents the comparison between the regression results of model 3 and model 15.

Table 52: Comparison among model 3 and model 15 (with social capital index)-across residing areas

Dependent variable:	Individual income	Individual income	Individual income	Individual income	Household percapita income	Household percapita income	Household percapita income	Household percapita income
Subjective well-being index	(3A-1)	(15A-1)	(3A-2)	(15A-2)	(3B-1)	(15B-1)	(3B-2)	(15B-2)
	Urban	Urban	Rural	Rural	Urban	Urban	Rural	Rural
Social capital index		0.135*		0.175*		0.129*		0.184*
		(0.0703)		(0.101)		(0.0692)		(0.0999)
ln(Individual income)	0.141***	0.126***	0.0233	0.0119				
	(0.0330)	(0.0338)	(0.0474)	(0.0475)				
ln(household percapita income)					0.182***	0.168***	0.0613	0.0670
					(0.0361)	(0.0368)	(0.0600)	(0.0597)
age	0.000163	0.000177	-0.00237	-0.00185	-0.000128	-0.0000530	-0.00236	-0.00168
	(0.00179)	(0.00178)	(0.00223)	(0.00224)	(0.00175)	(0.00174)	(0.00219)	(0.00221)
schoolyear	-0.00473	-0.00540	0.00534	0.00245	-0.00320	-0.00404	0.00535	0.00218
	(0.00464)	(0.00463)	(0.00517)	(0.00541)	(0.00453)	(0.00454)	(0.00515)	(0.00539)
female	0.0669	0.0813	-0.0583	-0.0337	-0.0365	-0.0112	-0.0712	-0.0447
	(0.0731)	(0.0732)	(0.0822)	(0.0829)	(0.0640)	(0.0652)	(0.0824)	(0.0831)
unmarried	0.0239	0.0284	-0.250***	-0.241***	-0.0134	-0.00524	-0.255***	-0.244***
	(0.0475)	(0.0474)	(0.0731)	(0.0729)	(0.0462)	(0.0462)	(0.0726)	(0.0724)
religious_participation	0.0106	-0.0171	-0.266***	-0.281***	-0.00110	-0.0267	-0.276***	-0.287***

	(0.0432)	(0.0454)	(0.0808)	(0.0808)	(0.0429)	(0.0449)	(0.0788)	(0.0785)
muslim	-0.0999*	-0.106**	-0.0592	-0.0494	-0.0960*	-0.102**	-0.0626	-0.0551
	(0.0518)	(0.0516)	(0.0520)	(0.0520)	(0.0512)	(0.0511)	(0.0517)	(0.0515)
SC	-0.0129	-0.0174	-0.0256	-0.0238	0.0150	0.00864	-0.0220	-0.0227
	(0.0532)	(0.0531)	(0.0535)	(0.0532)	(0.0531)	(0.0530)	(0.0524)	(0.0520)
OBC	0.0411	0.0303	-0.1000	-0.0813	0.00310	-0.00427	-0.0957	-0.0792
	(0.0620)	(0.0620)	(0.0913)	(0.0914)	(0.0618)	(0.0617)	(0.0903)	(0.0901)
muslim*SC	0.141	0.132	-0.0104	-0.0165	0.133	0.126	-0.0141	-0.0203
	(0.185)	(0.185)	(0.0847)	(0.0843)	(0.183)	(0.183)	(0.0845)	(0.0840)
muslim*OBC	0.0480	0.0454	-0.0720	-0.0912	0.104	0.0969	-0.0707	-0.0871
	(0.118)	(0.117)	(0.115)	(0.115)	(0.117)	(0.116)	(0.115)	(0.114)
asset_holding	0.142**	0.141**	-0.120	-0.118	0.136**	0.135**	-0.113	-0.110
	(0.0618)	(0.0615)	(0.0765)	(0.0761)	(0.0611)	(0.0609)	(0.0766)	(0.0761)
asset_holding* having_sss	-0.0276	-0.0344	-0.0465	-0.0542	-0.0374	-0.0432	-0.0595	-0.0668
	(0.0479)	(0.0478)	(0.0538)	(0.0537)	(0.0474)	(0.0473)	(0.0541)	(0.0539)
selfemployed	-0.0690	-0.0684	0.0553	0.0426	-0.0614	-0.0616	0.0605	0.0433
	(0.0541)	(0.0539)	(0.0643)	(0.0643)	(0.0535)	(0.0533)	(0.0625)	(0.0628)
casual_labour	-0.0961	-0.0864	-0.0644	-0.0529	-0.113*	-0.102*	-0.0599	-0.0510
	(0.0601)	(0.0601)	(0.0650)	(0.0650)	(0.0596)	(0.0597)	(0.0637)	(0.0635)
female*selfemploye d	0.0697	0.0623	0.0658	0.0573	0.0722	0.0652	0.0305	0.0335
	(0.107)	(0.107)	(0.149)	(0.149)	(0.106)	(0.106)	(0.140)	(0.140)
female*casual_lab ur	0.150	0.115	0.145	0.133	0.127	0.0938	0.149	0.142
	(0.189)	(0.189)	(0.111)	(0.111)	(0.187)	(0.187)	(0.110)	(0.109)
constant	1.554***	1.438***	3.060***	2.865***	1.372***	1.247***	2.786***	2.434***
	(0.316)	(0.320)	(0.424)	(0.437)	(0.307)	(0.313)	(0.480)	(0.514)
N	346	346	196	196	346	346	196	196
R ²	0.108	0.118	0.212	0.225	0.126	0.135	0.216	0.231
F	2.336***	2.428***	2.821***	2.861***	2.785***	2.844***	2.881***	2.947***

Standard errors in parentheses

* p <0.1 , ** p<0.05, *** p<0.01

Source: Calculated by authors

Consistent with previous results, the impact of decent work is insignificant and impact of social capital is positive and significant for both rural and urban workers. Impact of income and other factors remains unchanged.

9.3. Conclusion

This chapter explores the relationship among overall well-being, quality of work and social capital of informal workers as conceptualized and measured for this study. The findings suggest a general positive association among all these constructs. Although the associations are often weak and insignificant except for social capital and decent work i.e. there is positive association between good quality of work and high social capital. The regression results suggest that social capital also contributes to subjective well-being of informal workers when considered with other relevant socioeconomic factors. This finding is consistent with the existing literature. The impact of decent work is not pronounced.

Our study generally indicates that even though quality work is often accompanied by high social capital, social capital has larger positive impact overall well-being than decent work achievement. Overall well-being in this study is evaluated as a completely subjective measure based on perception of quality of life whereas quality of work i.e. decent work condition is to a large extent objective in nature. Social capital covers a broader area of life than decent work (which focuses on the work-related part) and, as evaluated in this study, it consists of a substantial part of subjective indicators. Therefore these constructs may not always reflect same direction. Nonetheless, all of them provide valuable information on life and well-being of informal workers.

Chapter 10: Summary of Findings and Conclusion

10.1. Summary of findings

The aim of this study is to understand well-being of informal workers using three alternative non-monetary concepts-subjective well-being, decent work and social capital. This thesis has attempted to meet four main objectives: constructing a subjective well-being index, constructing a decent work index, constructing a social capital index, and investigate how these indices interact with each other and with the conventional objective (monetary and non-monetary) measures of well-being. An empirical analysis has been carried out based on the data from primary survey of 550 informal workers (542 final responders) residing and working in the rural and urban areas of Hooghly district of West Bengal, India. The main findings of the thesis suggests that subjective measures of well-being tend to get influenced by material conditions and achievements of life and income is a strong influencer of well-being for informal workers who come from the poorer section of the society.

In chapter 5 we have constructed an individual level subjective well-being index for the responders and additionally tried to find out the major factors that influences their state of subjective well-being. We have followed the concept of subjective well-being as an umbrella term for subjective social indicators of well-being and constructed the composite SWB index as weighted geometric mean of two such subjective measures of well-being: psychological well-being and life satisfaction. Then we have used OLS regression models to find out factors that influences SWB of informal workers. As dependent variable, we have considered SWB index as well as PWB index and LS index. For income (which is the explanatory variable we focused on), logarithmic form of individual monthly income and household percapita monthly income are considered. We have run all the models for the entire group of responders as well as segmented groups across work categories and residing areas. Our findings suggest that material achievements like income and property holding is a strong positive influencer of subjective well-being of informal workers. Income contributes to SWB index as well as LS and PWB index, and the effect of household percapita income is higher than that of individual income. The factors of significant influence differ for life satisfaction and psychological well-being. PWB is found to be influenced by property ownership and residing area while LS is influenced by age, years of schooling, gender, residing area and work-category. Residing in rural area has a positive bias on subjective well-being of informal workers . Urban and rural determinants of SWB vary widely. The most stark difference is that neither income nor property-ownership has any significant effect in SWB of rural workers, unlike their urban counterpart. Regular wage-earners enjoy higher

subjective well-being than self-employed and casual labour and piece-rate workers, though the factors of influence do not vary that visibly across activity types.

In chapter 6 we have evaluated decent work achievements of informal workers at individual-level to understand the different components of decent work conditions for the group of responders. We have also tried finding out how supply-side factors like education can influence decent work conditions of informal workers. We have considered the seven security-based concept of decent work from People's Security Survey to construct the composite individual-level decent work index. The composite index is the sum of seven sub-indices-labour security, employment security, work security, job security, income security, skill reproduction security and representation security. The results reveal comparatively low achievement in income, skill-reproduction and representation security among all the dimensions and a generally worse decent work condition of rural workers compared to urban worker. Also, self-employed workers are the most disadvantageous among the three work-categories. Next we have run a set of OLS regression to investigate the effect of years of schooling on decent work achievement of informal workers and how the effect varies across residing areas and across gender, if at all. Our finding suggests that higher years of schooling can reduce decent work achievements of informal workers, i.e. for the people who are likely to end up in unskilled and semi-skilled employment sectors, the short-run cost of acquiring basic education exceeds its long-run benefits results (especially where highest years of schooling for maximum of the responders lie within eighth standard).

In chapter 7 we have constructed an individual-level social capital index for informal workers and tried to understand how social capital index can influence income of the responders. We have used the structural-relational-cognitive construct of social capital to calculate the index. To see how social capital can influence income and help poverty alleviation (if at all), a measure of affluence has been used where a person is considered to be affluent if they have any property holding and their household percapita income lies above the average household percapita income of similar people (belonging from similar residing area and work category). So the OLS regression model checked whether social capital affects individual income and whether the effect varies across affluent and non-affluent groups of responders. The result confirms that while social capital indeed contributes to higher income, these contributions are much higher for affluent responders, in fact the net contribution can be negative for non-affluent responders. Hence, not only the impact of social capital on income is heavily influenced

by existing socioeconomic condition of responder, social capital can even have detrimental effect on income if those conditions are not favorable. The results further show that given both are at same socioeconomic level of affluence, social capital is likely to add more income for a male worker than for a female worker. Lastly, while social capital does contribute to individual income, it still leaves the question open that whether the magnitude of that contribution can make any substantial effect on poverty condition of the present group of informal workers.

In chapter 8 we have explored the relationship among subjective well-being index, decent work index and social capital index and also attempted to see how decent work and social capital can contribute to subjective well-being, if at all. For the first part we have used correlation analysis and graphical representation. For the second part we have rerun the models from chapter 5 with decent work index and social capital index as additional explanatory variables. For this exercise we have considered only SWB index as dependent variable. The findings suggest that social capital index and decent work index share a positive association while their association with subjective well-being index is positive but weak. The regression results indicate that social capital index also significantly contributes to subjective well-being of informal workers when considered with other relevant socioeconomic factors. The impact of decent work is not pronounced. This implies, even though quality work is often accompanied by high social capital, social capital has larger positive impact on overall well-being than decent work achievement.

10.2. Some key implications of the findings

In this section we are going to note some key points that emerge from the findings and their implications on research and policy related to well-being of informal workers and well-being in general.

Decent work and education

One of our findings suggests a negative effect of years of formal schooling on decent work condition. Education is an important supply-side factor which helps formation of human capital. Therefore such finding is apparently counterintuitive. A possible reason identified by this study is the lack of vocational training and huge number of cases of early drop out (only 23% of the responders could continue study beyond eighth grade). Together they can make the short-run cost of getting formal

education higher than the potential benefit it can generate in long-run from semi-skilled or unskilled occupations. Cost of formal education can occur in form of time, money and other resources spent, forgone opportunity to acquire skill informally through assisting parents or working, and increased aspiration for better income and white-collar jobs (which in future can prevent the person from taking up jobs that are perceived not worthy, and if they cross this initial barrier, they can also suffer from deep dissatisfaction stemming from not living up to the potential, both having detrimental effect on decent work condition). Hence a lot of people cannot or choose not to continue formal education up to the level where it can make them better off in job market. There can be two ways of addressing this issue-reduction in cost of elementary education and vocationalization of education (which increase long-run benefit). The problem with vocationalization of education (that can benefit people likely to end up in semi-skilled/unskilled occupations) is that it has the potential of legitimizing child labour. Also, this kind of training can further reduce their social mobility and trap them within elementary occupations as future option. Therefore, a better way will be policies to reduce the money and resource cost of acquiring elementary education.

Social capital as a tool for poverty alleviation

Our study argues that the potential of social capital to enhance income and other economic outcomes are limited by the existing socioeconomics conditions. Therefore, while social capital can enhance income under certain circumstances, notions like ‘social capital is the only capital available for poor people’ or considering social capital as a mean to alleviate poverty condition may not be appropriate. Poverty alleviation requires upward mobility of poor people while social capital mostly acts for them as a safety net against poverty and income/resource uncertainty. One of the major ways social capital helps informal workers to earn more is the informal channels through which they receive information and find jobs, like personal contacts and word of mouth. Therefore, another important thing to understand about social capital when discussing its policy relevance is its power of exclusion. In an unequal society marred with discriminating practices based on religion, caste, gender, social capital of a relatively socially powerful group can be used to discriminate against minority groups and deny them their livelihoods- a phenomenon common under any majoritarian system. If development policies targeted towards building and maintaining social capital are not sensitive towards such regional realities, social capital can be detrimental towards livelihood and poverty condition of poor and marginalized people of society.

Subjective measures vs. objective measures of well-being

Traditionally GDP and income-based metrics have always been used to measure economic well-being. As world advanced, the concept of economic well-being began to expand beyond income and started including other objective forms of well-being such as health, education, environment. Easterlin paradox in the 1970s stirred up the debate about whether subjective measures of well-being should be a morally superior measure of well-being. And later in 2007 when Bhutan actually implemented the concept to measure Gross National Happiness, followed by the recessions, worldwide economic slowdown and global decline of mental health, that debate further intensified. And a desire to find alternative path of development and well-being grew further among researchers. Popularity of subjective measures of well-being grew simultaneously in the last decade. Question arises: what can be a better option- a paradigm shift in the notion of well-being and development, or expansion of the existing notion to have a broader and more inclusive understanding of well-being and development.

In this study we have considered a completely subjective individual-specific measure of well-being along with two different concepts that can closely influence well-being-decent work (mix of subjective and objective indicators) and social capital (mostly subjective indicators). We have found that even though all of them indicate something ‘good’ and ‘beneficial’ about one’s life and in that sense, ‘well-being’ of an individual in some way or other, they do not necessarily go in the same direction simultaneously. Also, all of these subjective measures tend to get influenced by material conditions and achievements of life. Therefore we can come to two understandings. Firstly, well-being is multi-dimensional and different concepts of well-being capture different non-substitutable constructs of well-being. Secondly, subjective measures of well-being do not exist in isolation and they interact with all the objective aspects of well-being. Moreover, because of their subjective nature, they are particularly sensitive to social conditioning to fulfill particular political agenda. For instance, people of a society can face immense material devastation after some natural disaster but also experience stronger resilience and community support. Hence, if only subjective measures of well-being are considered, such experiences amplified by political campaigning can result in a high level of self-reported well-being irrespective of the material loss the society has incurred and provide the government a chance to cut back the relief package. Therefore, though subjective well-being provides valuable information that objective indicators miss, considering them without complemented by the objective measures can be misleading and harmful.

10.3. Limitations

The study suffers from a number of methodological limitations which, as a result, limits the generalization of the findings of the study.

Simplified assumptions and limited number of indicators for indexing

The study rightly conceptualizes subjective well-being, decent work and social capital to be multidimensional construct. But the dimensions are selected exogenously instead of exploring the latent constructs which would have been more accurate measures of the actual dimensions. Also, all the indices have been constructed using a-priori weights and all the dimensions have been given equal importance. Given the method of aggregation, this has led to perfect comparability among dimensions in some cases which is not desirable. Moreover, this is a simplified assumption because relative importance of different dimensions can vary from person to person. Due to the time and resource constraint the questionnaire was kept minimal. As a result the reliability of indices is not high. Therefore the indices should be used to get a basic introductory insight of the respective constructs which can lead to further area-specific exploration.

Cross-sectional data

Lastly, the present study is a descriptive empirical analysis relying on cross sectional data. Longitudinal study in future can be done to understand how the determinants of well-being change over time, or to address more specific questions like exploring how specific aspects of a social system (like level of organized activities, engaging in community activities, trust in government) interact with the development processes over time.

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Appendix

Appendix 1: Division of work-categories

Table 53: Categorization of major informal activities of the responders

Name of profession	Categorization according to National Classification of Occupations-2015 (Division codes)	Categorization according to activity status definitions used in Fifth Annual Employment-Unemployment Survey 2015-16
Integrated Child development services or ICDS worker (Anganwadi)	5 (Service workers and shops & market sales workers)	Regular wage earner
Driver (auto/toto)	8(Plants and machine operators and assemblers)	Self-employed
Driver (private cars)	8(Plants and machine operators and assemblers)	Regular wage earner, casual labour and piece-rate worker
Transport worker (Driver/helper –truck, lorry, bus etc)	8 (Plants and machine operators and assemblers)	Regular wage earner, casual labour and piece-rate worker
Paddler (Rickshaw, van)	9 (Elementary occupations)	Self-employed
Aya or caregiver	5(Service workers and shops & market sales workers)	Regular wage-earner
Grooming professionals (barber, beautician)	5(Service workers and shops & market sales workers)	Self-employed, regular wage earner
Carpenter	7 (Craft and related trades workers)	Self-employed, regular wage earner, casual labour and piece-rate worker
Head-load worker, labour	9(Elementary occupations)	Casual labour and piece-rate worker
Construction workers (plumber, electrician, paint, marbel)	7(Craft and related trades workers)	Self-employed, regular wage earner, casual labour and piece-rate worker
Construction workers (helper, ghorami, uncategorized)	9(Elementary occupations)	
Factory labour	7(Craft and related trades workers)	Regular wage earner
Shop worker	5(Service workers and shops & market sales workers)	Regular wage earner
Security guard	5(Service workers and shops & market sales workers)	Regular wage earner
Mechanic	7(Craft and related trades workers)	Self-employed
Tailor	7(Craft and related trades workers)	Self-employed, regular wage earner, casual labour and piece-rate worker
Street hawker/vendor	9(Elementary occupations)	Self-employed
Housemaid	9(Elementary occupations)	Regular wage earner
Housemaid (cooking)	5(Service workers and shops & market sales workers)	Regular wage-earner
Potter, clay idol maker	7(Craft and related trades workers)	Self-employed, casual labour
Fisherman	6 (Skilled agricultural and	Self-employed, casual labour and

Farmer	fishery workers) 6(Skilled agricultural and fishery workers)	piece-rate worker Self-employed, casual labour and piece-rate worker
Book-binder, printing press worker	7(Craft and related trades workers)	Self-employed, regular wage earner
Worker in catering business	5(Service workers and shops & market sales workers)	Self-employed, casual labour and piece-rate worker
Cobbler	7(Craft and related trades workers)	Self-employed
Other employment (laundry, dungcake-making, thread-making,)	9(Elementary occupations)	Self-employed, casual labour and piece-rate worker
Other employment (gardening, poultry business, fishnet making)	6(Skilled agricultural and fishery workers)	Self-employed, casual labour and piece-rate worker
Other employment (priest, cable rent collector, tutoring)	5(Service workers and shops & market sales workers)	Self-employed, regular wage-earner, casual labour and piece-rate worker
Other employment (garment-beads and glitter setting, decorative flower making, cane-basket, leaf-plate making)	7(Craft and related trades workers)	Self-employed, casual labour and piece-rate worker
Due to very small number of responders, division 2 (professionals) and division 4 (clerks) have been clubbed under division 5.		
Source: Primary survey		

Appendix 2: Evolution of measuring happiness

- 1972: The concept of subjective well-being and happiness economics was first introduced by Bhutan into the realm of development policy planning through the concept of maximizing 'Gross National Happiness' rather than GDP. The concept was explained as 'development with value' or concentrating on the 'quality of growth' instead of absolute quantity.
- 2005: A second generation concept was developed to measure the national well-being for the developed countries like USA, namely Gross National wellness (GNW).
- 2007: Bhutan carried out their first and second GNH surveys in 2007.
- 2007: Thailand also introduced their Green and Happiness Index.
- 2009: Gallup world poll carried out a national level happiness survey in USA based on the concept of GNW.
- 2010: Bhutan carried out their second GNH survey.
- 2012: The first World Happiness Report came out in 2012 by UN Sustainable Development Solutions Network which not only provides an international happiness index for 155 countries, but also presents an overview of various researches on subjective well-being across the globe.
- Presently, apart from Bhutan, several other countries like France, Thailand, Canada, US, UAE as well as several states have their own framework of measuring happiness. International surveys like Gallup world poll (2005), World Value Survey (1981) European Social Survey, Global barometer surveys are also trying to create comprehensive time series database on various SWB indicators.

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Subjective well-being of the informal workers: an empirical study from Hooghly district of West Bengal, India

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Abstract: Based on primary data from urban and rural informal workers in Hooghly district of India, the paper attempts to explore the welfare of informal workers using the concept of subjective well-being. Subjective well-being is conceptualised through two broad dimensions-psychological well-being and life satisfaction. An individual-specific composite index is constructed to quantify subjective well-being followed by a series of regression analysis on the constructed indices. The findings suggest income to be a strong positive influencer of overall subjective well-being as well as life satisfaction and psychological well-being of informal workers. But a segregated analysis reveals that factors influencing subjective well-being distinctly differ across rural and urban workers. Rural workers tend to have higher well-being score than their urban counterpart and income does not have significant effect on their subjective well-being. Also, regular wage-earners tend to score higher in overall subjective wellbeing as well as life satisfaction than self-employed and casual labours.

Keywords: happiness economics; subjective well-being; subjective well-being index; life satisfaction; psychological well-being; factor influencing subjective well-being; informal worker; informal workers of India; well-being of informal workers.

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Evaluation of Decent Work Index for Informal Workers: An Empirical Study from Hooghly District, West Bengal, India

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Abstract

Decent work is considered to be crucial in the process of inclusive development and poverty alleviation in economies dominated by informal employment. This study is an attempt to understand decent work achievements of rural and urban informal workers of Hooghly district, West Bengal, India. The study uses the theoretical framework of seven work-based security dimensions from People's Security Survey (by International Labour Organization) and constructs seven individual-level sub-indices and one composite individual-level decent work index using primary survey data. Then, it investigates the effect of the supply-side parameters on decent work using simple OLS regressions. The findings indicate ineffectiveness of education to improve decent work condition of informal workers in the absence of adequate skill-building initiatives. It also reveals the poor work condition of rural informal workers and self-employed workers in general. The study emphasises the need of vocationalisation of education and upgrading the quality of informal employment to achieve decent work.

Keywords

Decent work, individual level decent work index, informal workers, factors influencing decent work, supply-side factors, education

Introduction

The 2030 agenda for sustainable development lists “decent work and economic growth” as goal-8 of the 17 sustainable development goals (SDGs). Introduced by International Labour Organization (ILO) in 1999, “decent work” is argued to be a necessity for poverty reduction and an inclusive and fair globalisation where “no-one is left behind” (ILO, 2019). The essence of decent work is a shared focus on the quality of employment besides creating maximum quantity of jobs. Therefore, decent work agenda is particularly relevant in developing and underdeveloped world, where the presence of unemployment,

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