

Understanding the Demand Side of Social Protection Programmes: The Case of Public Distribution of Food in India

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Abstract

India's poor performance in reducing hunger and malnutrition, despite sustained economic growth, is considered "a national shame" (as stated by former Prime Minister of India, Manmohan Singh, 2012). Faced with this, successive governments have implemented large-scale food security and anti-poverty programmes. The Public Distribution System (PDS), the world's largest food subsidy programme, has been the cornerstone of such initiatives. The National Food Security Act (NFSA) 2013, further broadens the scope of PDS by raising the level of subsidies, expanding coverage, and emphasising demand, especially in the choice of the food basket. Yet, PDS is plagued with charges of corruption, overpricing and delivery of low-quality grains. Additionally, significant power asymmetries are visible in the poor delivery of services, time-consuming bureaucratic procedures and ineffective grievance redressal systems.

Though several possible reasons account for these problems, one factor that is generally overlooked is lack of compatibility between rights-holders' need and what PDS is delivering. My thesis seeks to fill this research gap by investigating how PDS performs in meeting community's needs and preferences (including their interests, opportunities and constraints). My objectives are three-fold: assessing the role of heterogeneity in determining access, level of satisfaction, and possible remedies in cases of entitlement snatching. Entitlement snatching refers to the acts of the PDS functionaries to not let the rights holders get the right price, quantity or quality as mandated by law.

Drawing on Sen's entitlement approach (1981), Ribot and Peluso's (2003) theory of access, and interdisciplinary approaches from economics, sociology and psychology, I argue that heterogeneity drives what is needed, preferred or demanded from the PDS. Through mixed methods analysis, I explore in depth the role of social heterogeneity, in terms of class, caste, gender and political affiliation, in accessing the PDS. My research is also engaged in a comparative analysis across three Indian states of Bihar, Odisha and Eastern Uttar Pradesh, representing diversity in socio-economic conditions, cultural norms, governance systems, and political structures. The thesis

demonstrates how power relations embedded in local politics, caste and class heterogeneity, and political economy mediate access through state transfers. I emphasize the centrality of demand in understanding the effectiveness of the system.

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Acronyms

GHI	Global Hunger Index
IFPRI	International Food Policy Research Institute
GOI	Government of India
NSSO	National Sample Survey Office
MDGs	Millennium Development Goals
SDGs	Sustainable Development Goals
GDP	Gross Domestic Product
FPS	Fair Price Shop
FCI	Food Corporation of India
CCT	Conditional Cash Transfer
IKT	In-Kind Transfer
DBT	Direct Benefit Transfer
FHH	Female Headed Household
GP	<i>Gram Panchayat</i>
IAY	<i>Indira Awas Yojana</i>
FHH	Female Headed Household
GP	<i>Gram Panchayat</i>
BMI	Body Mass Index
RTF	Right to Food
NFSA	National Food Security Act
FAO	Food and Agriculture Organization of the United Nations
CT	Cash Transfer
IKTs	In-kind Transfers
FGDs	Focus Group Discussions

Glossary

<i>Salwar Kameez</i>	Indian dress
<i>Mehndi</i>	Henna
<i>Shaadi Shuda Mahila</i>	Married woman
<i>Gotra</i>	Clan
<i>Jati</i>	Caste
<i>Pradhan/mukhiya/sarpanch</i>	Village head
<i>Godamn</i>	storage
<i>Dal</i>	Lentils
<i>Niti ayog</i>	Planning Commission
<i>Pucca house</i>	Cemented
<i>Panchayati Raj</i>	Local Government

Chapter 1: Introduction: Efficiency, Equity and Cost Effectiveness in Social Safety Net Programme

India has made progress in dealing with chronic poverty during the last two decades.¹ Yet a sixth of India's population and a fourth of its children remain undernourished (IFPRI 2015). Despite high economic growth, with the slow reduction in the number of food insecure persons India still faces persistent and widespread problems of malnutrition (Chatterjee 2007; Ruel and Alderman 2013).² The most recent Global Hunger Index (GHI) 2017 ranks India 100 out of 119 countries, before Pakistan and Afghanistan, but behind neighboring Bangladesh (88), Nepal (rank 72) and Sri Lanka (rank 84).³ Even North Korea (93) and Iraq (78) fared better in hunger parameters and GHI rankings. While no longer in the "alarming" category, India's hunger status is still classified as "serious."

Not only hunger but also the burden of maternal and child under nutrition in India remains among the highest (Deaton and Dreze 2009; Swaminathan 2009; UNICEF 2008, 2009; Menon et al. 2009). Further, one third of all Indian women and over a quarter of men are underweight with body mass index (BMI) less than 18.5 kg/m². Rates of micronutrient deficiencies are extremely high, with almost 80 percent of children and 56 percent women anemic. Tables 1 and 2 below show the inter-temporal evolution of nutrition markers in India using National Family Health Survey (NFHS) and Rapid Survey on Children (RSOC-UNICEF) data.

Table 1

INDICATOR	2005–2006 NFHS	2013–2014 RSOC
UNDER-FIVE STUNTING (%)	47.9	38.8
UNDER-FIVE WASTING (%)	20.0	15.0
UNDER-FIVE UNDERWEIGHT (%)	43.5	30.10

¹ World Bank's Global Monitoring Report (2014-15) on the Millennium Development Goals lists India as the biggest contributor to poverty reduction between 2008 and 2011, with around 140 million or so lifted out of absolute poverty.

²Also Refer (Kiruba et al. 2013; Sachdev 2013; Kotecha 2011; Sen 1999; Posani 2010; Gulati 2012; HUNGaMA survey 2011. Also see Spears (2013) that notes the prevalence of child stunting in India worse than sub-Saharan Africa.

³ This index is based on proportion of people who do not get sufficient calories, proportion of children who are underweight and mortality rate for children under five (von Grebmer, Headey et al. 2013).

Table 2

INDICATOR	1998-99 NFHS II	2005-06 NFHS
Women with BMI <18.5 kg/m ²	36%	33%
Men with BMI <18.5 kg/m ²	NA	28%
Women with anemia (<12.0g/dl)	52%	56%

Source: Global Nutrition Report, 2014

The findings of the High-Level Committee (HLC) on Long Term Grain Policy (GOI, 2002) highlight the extremely high levels of food insecurity among the poor. The bottom 80 percent of rural and bottom 40 percent of urban households have a food expenditure share of over 60 percent making them highly vulnerable to food price increases. The poor with such high shares of food in the budget have little capacity to adapt if prices rise and wages fail to adjust. This is true not only for landless in rural areas but also for small farmers who are net buyer of food.

Further, micronutrient deficiencies, often called “hidden hunger”, relating to a lack of access to micronutrient rich foods, like vegetables, fruits, and animal source food, are widely prevalent in the Indian population. These can have a serious negative impact on long-term development (Saxena 2009). A large number of studies have documented the importance of micronutrients like iron, vitamin A, zinc and calcium in shaping maternal health, child birth weight and child undernutrition (Bhutta, Das et al. 2013, Black, Victora et al. 2013; Malhotra 2012). Although the earlier Tenth Five Year Plan recognized the importance of micronutrients and included many interventions to address their deficiencies, access to vitamins and minerals, particularly for the poor, remains a concern (Planning Commission, GOI 2002).

Even in terms of energy intake, wide inter-group disparities prevail in India. Calorie intake data from the National Sample Survey Organization (NSSO) over different rounds show that at any given point in time, the calorie intake of the poorest income (expenditure) quartile continues to be 30 to 50 percent less than that of the top quartile. This is despite the fact that the poor invariably need more calories since they rely relatively more on manual work to meet their livelihood needs (Kumar & Joshi 2014). The data shows higher reliance of the poor on cereal-based calories because of a lack of access to other high value sources. Also,

the differentiation by social status in terms of food or nutrition security is quite stark in India (Kumar & Joshi 2014).

Since the year 2000, global attention has been placed firmly on food and nutrition security, first through the Millennium Development Goals (MDGs) and now through Goal 1 of the Sustainable Development Goals (SDG). Indian policy makers, too, have refocused attention on the links between poverty and hunger, recognizing freedom from hunger as a basic human right. India allocates a substantial portion of its domestic budgets to social safety net programmes. Among the programmes, food-based safety net programmes cost between 1 and 2 percent of the country's GDP (Bhattacharya et al. 2017).

The Right to Food (RTF) campaign in India has been mobilizing and advocating on hunger and malnutrition for well over a decade. RTF comprises a network of individuals and organizations working together to realize the right to food in India. The Right to Food Campaign is based on the principle that everyone has a fundamental right to be free from hunger and that the primary responsibility for guaranteeing basic entitlements rests with the state. Over time the case moved beyond the courts towards a larger public campaign for the right to food (Drèze 2002). The government of India passed the National Food Security Act, designed to ensure access to adequate food at affordable prices. Beginning as an ordinance passed in July and then as an act of Parliament in September 2013, the National Food Security Act seeks, according to its preamble, to “provide for food and nutritional security by ensuring access to adequate quantity of quality food at affordable prices to people” (GOI, 2013).

In this thesis, I focus on the Public Distribution System (PDS), the largest food-based safety net programme in India, in terms of both government expenditures and number of beneficiary households (GOI 2016). In 2011 it cost almost 7 billion dollars i.e. as high as 1 percent of India's GDP. It covers 800 million people providing subsidized grain through a network of more than 500,000 fair price shops (FPSs) across the country (Mishra 2013; Bhattacharya et al. 2017). The distribution of subsidized cereals through the PDS remains the nucleus of India's social protection system. In addition to its developmental role, food-based safety net programmes also play important protection roles during shocks and crises. The small farmers even though they primarily produce grains are generally reliant on PDS

for their basic food security. The role of PDS for small farmers gets amplified with majority of agriculture being rainfed making them vulnerable and reliant on safety nets like PDS.

Since independence and following famines such as the infamous Bengal famines of 1943, food security and nutrition related social safety net programmes (SSNP) in India comprising systems like PDS have adopted an interventionist policy stance. PDS comprises centralized procurement and subsequent distribution of subsidized food through government owned fair price shops (FPS). However, much has changed since. The Green revolution of the 1960s made India self-sufficient in food grains. Though food self-sufficiency began to improve, and despite the fact that PDS faced problems of weak institutions, elite capture, rent seeking and inefficient technologies, the nature of India's food policies has not changed substantively

While there is focus on improving the efficiency of SSNP including PDS, research efforts have largely been directed towards operational efficiency of the programmes from the supply side. However, improvement in these programmes including PDS is incumbent upon taking into consideration the demand side to ensure that the system is responsive to the needs and preferences of the intended and potential rights-holders in these programmes. The rationale for needs and preference assessment is that when the SSNPs are well aligned with the community's needs and preferences they can result in economically and socially desirable outcomes. When what is provided by the programmes is not in line with the preferences and needs, it can result in low uptake and several leakages in the system.

Needs assessment in safety net programmes can lead to improved programme performance and better targeting akin to the impacts of community participation in social programmes (Baland and Platteau 1996, La Ferrara 1999 and Isham et al. 1995). Indian states for example which employed village councils to select rights-holders had a much smaller proportion of non-poor participating households (Copesake 1992). Similar results were found in Subbarao et al. (1997) for the involvement of communities and local groups. An essential condition for greater community participation is robust needs assessment. **When** the needs of the community are internalized in programmes, community participation can improve leading to improvement in programme performance. Hence, in a reverse manner, the role of communities is also important in articulating needs in relation to the PDS.

Hence in this thesis I make a case for a rigorous needs assessment to improve outcomes in social safety nets in general and food and nutrition security programmes in particular. Through this assessment, I bring up the question - can implementable changes based on preferences and needs of the targeted population be identified and prioritized to ensure positive impact of actions and bring about tangible improvements in food security and state of undernutrition in India.

The practice of conducting needs assessments has been quite prevalent following natural crises but has not been common in the case of safety net programmes. In the 18th century, the Duke of Pombal requested a questionnaire survey to estimate the impact of the earthquake and subsequent tsunami that devastated Lisbon in 1755. The survey captured information on issues such as survivors' experiences. The knowledge collected led to the adoption of new building regulations (FAO 2016). In recent times the Food and Agriculture Organization of the United Nations (FAO) focus is on food security of crisis-affected populations to assess the needs. In contrast, there is a significant research gap with regard to food-based safety net programmes in terms of the needs assessment of the targeted population.

Indeed, the individual needs and preferences *inter alia* are a function of different socio-economic factors such as purchasing power, social status, gender and social identity. Hence, the inherent heterogeneity in each context has a bearing on needs and preferences of the target population. With SSNP like PDS, considering the heterogeneity in the population is an important factor in determining the proper functioning of the programme in terms of its efficiency, equity and cost effectiveness. Heterogeneity thereby plays an important role not only in determining the benefits from the programme but also what implication it has on welfare outcomes.

Since in this research the primary driver of needs assessment is heterogeneity, my first objective is to appraise the concept, then assess the degree of heterogeneity in my selected research sites based on socio-economic characteristics, geographical diversity among others. Following from this analysis, I propose to assess the needs and preference of the rights-holders about the PDS that is dependent on various factors underlying heterogeneity and argue that such an analysis is a vital precondition to making SSNPs more welfare oriented.

In this introductory chapter I will first highlight the historical perspective of the food and nutrition policies in India influenced by several events such as colonial era policies, famines and persistently high share of poor in the population. I try to highlight the top down nature of policies and programmes where the rights-holders' perspective is often overlooked, discuss the rationale of my thesis objectives and the questions I seek to examine. Second, I discuss briefly the research methodology and the analytic tools I use; and third, I present a road map of the subsequent chapters.

1.1 Background

1.1.1 Food and nutrition insecurity in India: A historical perspective

The history of food insecurity with dependence on food aid forms the backdrop in which the needs and preferences as well as the design of food and nutrition policies in India need to be analyzed. Institutions once created tend to persist (Acemoglu et al. 2001), particularly in underdeveloped countries (Rajan and Zingales 2006), a reality that needs to be kept in mind in studying food and nutrition policies and delivery mechanisms in India.

India has a long history of dealing with food insecurity. The colonial government developed the first set of famine codes to deal with food scarcity in the late 19th century. India's institutionalized efforts to address food insecurity can be traced back to World War II when food rationing was introduced in major urban centers. The Bengal famine of 1943 marked the beginning of comprehensive measures with food rationing, movement restrictions, storage laws and public distribution of food. Even after independence in 1947, as chronic food shortage and threat of famines persisted, rationing continued in urban centers (Kumar et al. 2010).

During the 1950s and 1960s, facing significant food shortages, India had to rely on PL 480 agreement with the United States for food aid⁴. US president Lyndon Johnson used PL-480

⁴ PL 480 or Public Law 480 refers to the law that originated in 1954 under the US food aid programme. This law which was passed under the Agricultural Trade Development and Assistance Act was meant to enable food deficit "friendly countries" to purchase US agricultural commodities with local currency, thus saving foreign exchange reserves and relieving US grain surpluses.

agreements as leverage in securing support for U.S. foreign policy goals, even placing critical famine aid to India on a limited basis, until he received assurance that India would implement agricultural reforms and temper criticism of U.S.'s Vietnam policy (See US state records at <https://history.state.gov/milestones/1961-1968/pl-480>). Apart from aggregate food supply, a major issue existed relating to food distribution in a manner that would ensure access for poor households. (Kumar et al. 2010).

Policies to ensure access to food for the poor form the genesis of SSNP like PDS (Kattumuri 2011). As discussed above, public distribution of essential commodities had been in existence in India during the inter-war period with its core function of rationing (Ministry of Consumer Affairs, GOI, accessed November 2014). Ensuring access to grains was probably compatible with the needs of the population in the early post-independence period because of the pressing need for minimum calorie-based food security. For equity and manageability, standard allocations of food grains were prescribed independent of household characteristics other than size (Planning Commission, GOI 2005).

1.1. 2 The changing role of PDS

The outreach of PDS was extended to tribal blocks and areas of high incidence of poverty in the 1970s and 1980s. This expansion would meet the unmet demand of PDS in areas that lacked access to food. Till 1992, PDS was a general entitlement for all citizens where a fixed amount of food grains, sugar and edible oil were distributed through government owned shops at prices lower than the market rate (GOI, Ministry of Consumer Affairs, accessed November 2014). The product choice in the PDS was driven by the procurement policies that focused primarily on wheat and rice, had seen major improvements in productivity following the Green Revolution (Nawani 1994) and was not based on beneficiary preferences.

To focus on the poor, a 'Revamped Public Distribution System' (RPDS) was launched in June 1992 in 1775 blocks in 'backward' areas of the country.⁵ Subsequently, the Targeted

⁵ The criteria recommended by Planning Commission for identification of backward areas includes: (i) Density of population per sq.km of area. (ii) Percentage of agricultural workers to total workers. (iii) Percentage of literate population (iv) Percentage of school going children. (v) Total per-capita income. (vi) Per capita income from agriculture. (vii) Sex ratio, industry and mining. (viii) Availability of infrastructural facilities. (ix) Per

Public Distribution System (TPDS) was introduced from June 1997 comprising differential food subsidy across households (classified as Below Poverty Line (BPL), Above Poverty Line (APL) and poorest of the poor as *Antyodaya Anna Yojana* - AAY).^{6,7}

Under TPDS, the identification of households in different categories (BPL, APL and AAY) was a key issue done by the states as per poverty estimates of the Planning Commission (GOI, Ministry of Consumer Affairs, accessed November 2014). Yet, there was no effort in assessing what the heterogeneous population wanted in relation to the PDS while its selection mechanisms and the extent of subsidy went through radical changes. The allocation of BPL families and the prices also changed over time while allocation to APL families was at economic cost. Further, to avoid possible exclusion of poor families, the BPL list was expanded.⁸ In all these changes, the needs of the community were never assessed.

In 2000, the allocation to BPL families was increased from 10 kg to 20 kg of food grains per family per month at 50 percent of the economic cost, while allocation to APL families was at economic cost. Further, to avoid possible exclusion of poor families, the BPL list was expanded in 2011 (to equal 65.2 million in 2013). The earlier projections were based on 1995 data provided by Registrar General and the new one used the 2000 data. Two further revisions, increase from 20 kg to 25 kg per family per month from July 2001 and then to 35 kg from 2002, aimed at improving calorie sufficiency (Planning Commission, GOI 2010).

capita consumption of electricity (x) chronically drought prone areas. (xi) Chronically flood prone areas. (xii) Length of surfaced roads per 100 sq. km. of area. (xiii) Public health care system. (xiv) Safe drinking water facility. and (xv) Poverty rates.

⁶ Based on various studies (Parikh 1994; Ahluwalia 1993; Radhakrishnan 1996; Jos Mooij 2001) that showed universal Public Distribution System (PDS) was inefficient and did not reach the real poor, the shift to TPDS was done in 1997.

⁷ During the first 10 years of its implementation, TPDS was criticised for leakage, mis-targeting, identification errors and inefficiency (Khera 2008; Arora 2001; Hirway 2003; Swaminathan and Mishra 2001).

⁸“To work out the population below the poverty line under the TPDS, at the Food Minister’s conference in 1996 there was a general consensus for adopting the methodology used by the expert group under professor Lakadawala set up by the Planning Commission. The BPL households were determined on the basis of population projections of the Registrar General of India for 1995 and the State wise poverty estimates of the Planning Commission for 1993-94.”(Ministry of food and consumer affairs, GOI)

Such a focus on calorie norms has thus persisted in the National Food Security Act, 2013 (NFSA), which continues to depend on the PDS for delivery. This is not surprising given its origin, the Right to Food case filed by the People's Union of Civil Liberties in 2001 and a series of Supreme Court orders directing universalization of ICDS as well as provision of food to the poor. The National Food Security Act emerged as a part of the common minimum programme of the United Progressive Alliance (UPA) Government in 2004 and was finally passed as legislation in September 2013. However, given its focus on alleviating hunger and ensuring food distribution, its potential for addressing India's nutritional challenges remains unknown.

The coverage and entitlements under the NFSA have undergone change compared to TPDS. NFSA 2013 provides for coverage of up to 75 percent of the rural population and up to 50 percent of the urban population under TPDS. While before the NFSA, households were classified into three categories, as stated above, there are now two main categories of entitlement-holders: AAY households; and Priority Households (PHH), who hold BPL or NFS cards. Food grains entitlement are 5 kg per person for PHH category and 35 kg per household for AAY households; prices are fixed at INR 3/2/1 per kg for rice, wheat and coarse grains respectively⁹.

Although the National Food Security Act is crucial for the poor, it is especially critical for the persistently excluded and the groups of Scheduled Castes and Scheduled Tribes. These groups depend heavily on casual wage labour in rural areas, and their poverty rates are high (Kishore et al. 2014). There are different pathways through which NFSA can affect food security under different contexts of macro level sufficiency and deficits. In states that are self-sufficient in grains and farmers are not selling to the procurement agencies, the extra grains pumped into the system is likely to depress prices and affect small farmers as producers. Other impacts are in terms of diet diversity as with NFSA, relative prices move in favour of non-cereals food.

Note that the BPL list is based solely on economic status. With social disparity and errors with income/expenditure measurement, such a classification might not be preferred by those

⁹ These are subsidized prices mandated by the government of India. The corresponding market prices are on average INR 35-40/25-30/ 12-18 per kg for rice, wheat and coarse cereals.

excluded or are near the cut-off income. Also, incomes are highly variable, and it takes only a shock to move a household from APL to BPL status. Indeed, the current PDS system has several inclusion and exclusion errors (Ramaswami, 2013; Swaminathan 2008).¹⁰

1.2 Research question and objectives

Even though poverty has gradually reduced in recent decades, vulnerability remains high and new sources of vulnerability have emerged (for example from climate change). The diversity among the poor has increased (Deaton and Dreze 2002; Banerjee et al. 2006; Somanathan and Somanathan 2009), yet India's ability to respond adequately has been lacking. Despite the country achieving a record food grain production of 241 million tonnes in 2010-11, the gap in intake between those food secure and those comparatively food insecure has been widening. The poor have not gained the intended benefits from "targeting" in the PDS (Dutta and Ramaswami (2001); Swaminathan and Mishra 2001; Sundaram 2003; Jain 2004; Saxena 2009; Svedberg 2010). With this background, this thesis proposes that one of the reasons for this lapse in food security outcomes from policies involving programs like the PDS has been the lack of robust needs assessment of the programme. Hence, this research aims to investigate how PDS performs in terms of meeting the community's needs and preferences (including their interests, opportunities and constraints).¹¹ Further, communities are heterogeneous, deriving also from their food cultures and social norms.

In my research, I explore how the opportunities and constraints faced by the communities and the preferences (such as tastes in consumption) determine the needs regarding PDS. The motivation for this study comes from the prior belief that for various reasons including historical continuity, SSNP are often designed without accounting for changing needs and preferences.

The changing needs and preferences are a result of several underlying factors such as modifying dietary patterns, improving access to information, and changing aspirations of the

¹⁰ Planning Commission (GOI) survey of 2004 states that 58 percent of the subsidized food grains do not reach the BPL families, with 36 percent on the black market, and the rest reaching the non-poor.

¹¹In my thesis I refer to the beneficiaries/participants of these programmes as *Community/Rights-holders*

people.¹² When there is a mismatch between what is desired and what is provided, my conjecture is that there is greater scope for leakages and corruption.¹³ If, for example households do not need equal amount of grains every month and do not lift grains during some months, it can be easily diverted to the open market.

The objective of the social protection programmes should be to address various vulnerabilities; hence they should be both objectives-driven and community-driven rather than instrument-driven (Devereux 2006). Instrument driven programmes take generic delivery systems for example a cash transfer and apply it to different contexts. In contrast objectives and community driven programmes customize based on community's needs, keeping in mind the objectives of the programme. The core of needs assessment is heterogeneity across households which can be examined from several perspectives - anthropological, economic or institutional.

The main research question I examine in my thesis is to develop an understanding of how heterogeneity mediates the functioning of PDS in India. Through a combination of qualitative and quantitative methods, I examine how far the PDS meets the community's needs and preferences.¹⁴ In assessing the needs and preferences contingent on characteristics, in the thesis, I pay special attention to intersectionality i.e. gender and caste, caste and class each mediated through the social and institutional networks of the rights-holders.

This research feeds into the body of work that provides robust evidence on how community participation can lead to improved outcomes and better targeting (Isham et al. 1995; La Ferrara, 1999). From a survey of country experiences Subbarao et al. (1997) find that programmes that involve communities and local groups achieve better targeting. In the same light, in my research I try to capture the payoffs from targeting specific groups like women. At a basic level, such targeting could be beneficial as they are better in making food related

¹² Social security, welfare, flexibility and equity are among the objectives that shape the social contract between the state and citizens.

¹³ Leakage refers to the difference between the amount of grains supplied to the PDS system and the uptake by the households that goes unaccounted for.

¹⁴ Needs assessment is a way of asking a group or community members what they see as the most important needs of that group or community. Implemented through a survey it is expected to guide future action. Generally, the needs that are rated most important are the ones that tend to get addressed

decisions, especially when there are young children to be fed (Alderman 2002). Other reasons for targeting women is because they are more prone to their entitlements being snatched away due to asymmetries in power. The same logic extends to targeting of other subaltern groups such as those belonging to lower caste.

These reasons for targeting are in principle desirable for achieving socially optimal outcomes. An essential part of my thesis is to gauge the difference between the potential and the realities in the system. While targeting of groups and affirmative action have been attempted in SSNP, often perverse incentives have come to the fore and have undone the potential benefits.

Conning and Kevane (2002) argue that despite growing awareness about SSNP in developing countries, it has not translated into effective action because of the failure to effectively reach and engage the poor. Devereux (2006) argues that the design of any SSNP should be driven by an assessment of the nature of vulnerability and an understanding of the economic environment (specifically a market analysis) and the socio-cultural context (especially a gender analysis) into which the SSNP is to be introduced.

1.2.1 Scope of this research

There are several programmes that collectively affect the food security and nutrition outcomes and I believe needs assessment is relevant in each.¹⁵ However, to keep it manageable and explore the issue in greater detail, I focus on PDS where there is wide variation in performance across states. Following Gentilini and Omamo (2011, pp.334), “A bottom-up, demand-led, evidence-based, sequential and iterative approach to social protection is likely to be politically and economically sustainable than any, although well-intended, ideologically-driven initiative.” Assessing how the PDS responds to changing conditions of vulnerability and aspirations across heterogeneous population groups is the major thrust of this research.

¹⁵ (See Annex 2 for the classification of social protection programmes in India and their relevance for food and nutrition)

1.2.2 Research sites

My research is based in the three Indian states of Bihar, Odisha and Uttar Pradesh (eastern UP). (See chapter 3, section 3.7 for further details about my research sites). Bihar is one of the poorest, and most densely populated states in India. With a population of 104 million (8.6 percent of India's total), it is the largest state after Uttar Pradesh and Maharashtra. One in six poor Indians lives in Bihar. In 2009/10, 55 percent of the rural population lived below the poverty line. Because of population growth, between 2004/05 and 2009/10, the number of rural poor increased to 50 million from 45.4 million.

Poverty and malnutrition rates have remained persistently high. Bihar is predominantly a rural state with urbanization at only 11.3 percent (about one-third of India's average). Because of its topographic and climatic conditions, Bihar is also vulnerable to natural disasters (for example, droughts and floods) (Kishore et al. 2014, Joshi 2014). For these reasons, PDS has great significance to Bihar. My research is focused on five districts of Bihar.

Odisha is predominantly a tribal region and the two districts there are also among the most backward districts in the country. One district in Eastern UP with similar conditions to neighboring districts in Bihar provides a good comparator where the main differentiator is the governance system in general and governance of the PDS in particular.

1.3 Methodology

An important feature of my analysis is the use of mixed methods. Though I deal with this in detail in Chapter 3, section 3.1, I present here some important elements of mixed methods employed in my thesis to put the analysis in perspective. Since needs assessment regarding PDS is focal to my research, I have used both quantitative and qualitative primary surveys in conjunction to obtain a clearer picture of the needs and preferences of the community in

relation to the PDS. In addition, I have also used secondary data such as Village Dynamics Studies in South Asia (ICRISAT) wherever needed to analyse needs and preferences.¹⁶

Using mixed methods, I try to explore causal links between heterogeneity and utilization as well as valuation of PDS. A more challenging task was to establish the causal pathways whereby if PDS is so designed that it is in line with needs and preferences, both the uptake and valuation of the PDS improve. In trying to establish such links there can be several confounding factors such as improvements in general governance, or awareness among the rights-holders.

1.3.1 Research Ethics

I am an Indian national. Having many prior years of research experience working in India including field work, I was aware of the sensitivity around different cultural norms, gender issues and social identity and wide inter-state variations. Care was taken to ensure that none of these norms were violated. I was also aware that despite being an Indian national, I was perceived as one from the privileged section of the society. Sensitivity to cultural norms and values, respectful behavior with the research participants was always ensured. In addition, the information from this study, if published in scientific journals or presented at scientific meetings, will not reveal the participant's identity. All data collected are confidential. I transcribed the audio recording and one set of transcripts with identifiers is in my possession in a locked cabinet. I had the appropriate ethical clearance from IFPRI and UEA's School of International Development for conducting research in India (Refer to the ethics application form, approved by the UEA ethics committee)

1.4 Outline of Chapters

In the second chapter, I frame the concepts around heterogeneity that forms a basis for differential needs and preferences. I locate these within the larger context of Social Safety Net Programmes (SSNP) and social protection. I engage with the debates around needs and interests, and preferences of rights-holders in these programmes, given the correspondence

¹⁶ See <http://vdsa.icrisat.ac.in/>

between heterogeneity and outcomes and experiences that create a basis for needs assessment.

I try and establish that needs assessment is more than just an analytical tool. Incorporating needs assessment in design and implementation of SSNP in general and PDS can offer a more locally relevant system. This would make PDS accessible and acceptable to the rights-holders. Also, it is likely to lead to greater cost effectiveness and thereby bring higher social returns to investment.

As heterogeneity determines the exigency of needs assessment, the issues are to be judged locally based on several factors some of which are observed and some are not easily observed. Drawing from the analysis in this chapter, I also outline how I propose to deploy this framework of heterogeneity and needs assessment in my subsequent chapters.

The third chapter describes the context of my research sites, simultaneously exploring the heterogeneity embedded therein. In terms of the context derived from the similarities and differences across research sites, I pay special attention to the granularity with which differences come up for relevant analysis. At times it is not the caste per se but the sub caste distinctions for example that matter. The multidimensionality of attributes that determine the outcomes related to the SSNP and extend to prospective choices are highlighted in the context chapter. I also describe my data and also lay out the methodology with its different elements, quantitative and qualitative, observed and unobservable factors used in the analysis.

In Chapter 4, based on empirical data, I highlight issues of gender, caste and class in understanding how needs and preferences are shaped. Drawing from Sen's (1981) entitlement approach and Ribot and Peluso's (2013) theory of access, I highlight the different entitlement failures and access issues related to PDS. The two approaches though related in several dimensions, also have differences that I draw from. Conceptualized in terms of heterogeneity, I assess the significant variation based on gender, caste and class and the intersectionality of these three factors in affecting experience with the PDS, as a determinant of the needs leading to the things desired out of the PDS. Poverty and vulnerability in

different forms that are a function of several attributes determine the case for realignment of the PDS to maximize its effectiveness.

On the institutional side, several policy actions and initiatives have aimed at improving the outcomes from a food-based safety net such as the PDS. From the governance perspective, I choose the themes of decentralization and affirmative action for greater exploration. Both of these are quite salient given the power relations and social differentiation based on gender and social identity that affect the way in which PDS is used. In Chapter 5, I examine how decentralization and affirmative action play a role in the functioning for the PDS. I also look at the issue of governance at the PDS level in terms of its delivery mechanisms, grievance redressal systems, eligibility protocols and other preventive and corrective systems. Different socio-economic factors seem to affect the governance structure at the broader level, and in turn access to PDS.

In Chapter 6, I bring in the idea of informal and formal institutions, and how these shape coping strategies that the rights-holders generally adopt to secure their entitlement from the PDS. The analysis here focuses not only on securing entitlements but on broader terms including quality of services rendered and the issues relating to eligibility itself. I assess and highlight an array of coping mechanisms including inaction, contextual rationalization and trading off of the benefits. What would look puzzling at first sight, often turns out to be a rational response given the realities based on social, economic and even political differentiation. Degrees of adjustment to entitlement snatching from the affected parties itself is a function of incumbent heterogeneity and present the wide spectrum of coping mechanisms.

Having laid out the many different dimensions of heterogeneity stemming both from the input as well as output side, in Chapter 7, I move on to analyze the needs and preferences of the rights-holders of PDS in terms of its three attributes: product portfolio; delivery mechanism and selection mechanism. Heterogeneity is found on individual, household and community characteristics as well as due to institutions and governance of the system. I try to understand the determinants of needs and preferences comprehensively. I discuss how the basis of needs assessment because of heterogeneity is mediated through both the experiences with the PDS as well as the aspirations that are driven by the changing circumstances.

The concluding Chapter 8 integrates these analyses. I summarize the evidence on how considering the heterogeneous nature of the target population, needs assessment need to be an integral part of the functioning of SSNP for improved outcomes. I then discuss the implications of this analysis for constructing a framework of SSNP that allows for needs assessment, considering the differential needs, interests and preferences of the rights-holders.

Chapter 2: Conceptual and Theoretical Framework and Literature Review

In this chapter I lay out the concepts that help in understanding the context of PDS as an SSNP and different attributes that interact with each other to determine the functioning of the system and ultimately bear on the needs and preferences (which I discuss later, section 2.8, as relevant concepts themselves). I discuss India's SSNP and state of transfer in general and the PDS in particular. In doing so I draw out the key concepts that aid in understanding the functioning of the PDS, the experiences of the actual or potential rights-holders that get reflected in what is preferred and /or desired out of the PDS.

In low-income countries, more than one billion individuals are enrolled in at least one safety net programme (Gentilini et al. 2014). These programmes come in a variety of forms that functions according to a “particular objective” (Hanlon et al. 2010: pp. 28). Some supplement consumption in hard times. Other newer, more nuanced, social protection programmes aim to address the underlying market failures that may have contributed to a household's persistent state of poverty in the first place. The role of SSNP as a solution is driven by a belief that directly addressing these failures may help families break out of a poverty trap (ibid). However, the ultimate choice of programme—or combination therein—that countries choose to implement depends on their social goals, institutional capacity including the available resources. They are critical to reducing poverty because they support inclusive growth and provide resources to the most vulnerable in society (World Bank 2011).

Traditionally SSNs have been thought of as mechanisms for redistributing income and improving the welfare of the poor and vulnerable through subsidies, transfers and capacity strengthening. However social protection “must address not just income deficits but also structural vulnerabilities and power hierarchies at all levels of society if it is to be an effective means of tackling social exclusion and marginalization” (Jones and Shahrokh 2013; pp.1).

SSNP according to Coady (2004), can be broadly categorized (by no means exhaustive) as 1) food subsidies where PDS is an example, both universal and administratively targeted, and 2) public works schemes that employ the poor on projects that maintain or create community assets. In my thesis I focus on the former where PDS particularly after the

enactment of the National Food Security Act (NFSA 2013) is near universal and is administratively targeted (for more on NFSA see chapter 1, section 1.1.2).

Conning and Kevane (2002) argue that despite growing awareness about SSNP in developing countries, it has not translated into effective action because of the failure to effectively reach and engage the poor. To reiterate, Devereux (2006) argues that the design of any SSNP should be driven by an assessment of the nature of vulnerability and an understanding of the economic environment (specifically a market analysis) and the socio-cultural context (especially a gender analysis) into which the SSNP is to be introduced.

2.1 SSNP and PDS

Several of India's public programmes in the domain of SSNP are aimed at addressing food insecurity using either social assistance (protection against poverty) or social insurance (protection against vulnerability). Vulnerability could be best addressed in the short term through safety nets in the form of cash or in-kind transfers (such as the PDS), attempts to restore collapsed or adversely affected livelihoods (see cash vs in kind debate in section 2.6.2 below, and more in Chapter 7, section 7.3).¹⁷

While studies have argued for alternatives in SSNP, none emphasizes the importance of needs assessment in SSNP (Chapter 1, section 1.2). In my research, I therefore propose to assess the needs and preferences in terms of its constituents such as what (e.g. food items, commodities) to target, who (e.g. whether women, households or individuals) to target and how (e.g. whether inclusion or exclusion criteria) to target in implementing PDS. The literature on SSN is "dominated by design and management issues, such as targeting, coverage, leakages, and fiscal and political sustainability" (Devereux 2000, pp.224). Several

¹⁷ For example: Alderman (2002) argues that food subsidies affect nutrient consumption differently than income transfers and shows that even with quotas and food stamps, food related transfers encourage consumption possibly due to increased control of resources by women. However, Jha, Kotwal, and Ramaswami (2013), in their analysis of SSNP in Bangladesh, India, Indonesia and Philippines, find a striking commonality in terms of ineffective targeting efforts and make a case for cash transfers as an alternative to alleviate some of inefficiencies of in-kind transfer. Umali-Deininger and Deininger (2001) also propose 'food coupons' as an alternative delivery mechanism for PDS. Dutta and Ramaswami (2004) argue that self-targeting by subsidising an inferior commodity (e.g. coarse cereals) does not necessarily lead to higher welfare. Welfare gains also depend on the shares of the subsidized commodities such as coarse cereals in the budgets and would thus vary by context.

questions then arise in this regard that feed into issues related to needs assessment such as: a) Which targeting mechanism is most cost effective? b) Which delivery mechanism is preferred by the rights-holders?, and c) how does heterogeneity (for example based on gender, caste, class) bear on the choice of mechanisms and its design?

Delivery issues address the effectiveness of the programme from the design and implementation perspective. On the delivery side, SSNP could be better designed and more effectively implemented, for maximum impact on reducing poverty and hunger. The needs assessment here could consider the following aspects of the programme:

- (i) How well targeted is the programme, in terms of reaching the intended rights-holders and minimizing leakages to ineligible beneficiaries?
- (ii) What is the coverage of the safety net, in terms of vulnerable groups who are either included or excluded from receiving benefits by the eligibility criteria?
- (iii) To what extent do processes of consultation and participation of intended rights-holders inform the design and implementation of the SSNP
- (iv) What is the direct impact of the transfer on the beneficiary, in terms of improving food security and reducing vulnerability?

There are several contextual factors that determine consumers' food demand and the level and type of engagement with food-based SSNP like the PDS. As incomes grow with increased urbanization, women's labor force participation, information networks and altering lifestyles, these have a direct bearing on how consumers access PDS and with what expectations.

At the household level, apart from changes in income, evolving food habits, gender relations, and changing aspirations (with more resources allocated to education and other non-food items) have also become important factors shaping food security (Rao 2012). Village studies conducted by ICRISAT in Andhra Pradesh, India, demonstrate that despite rising incomes from livelihood diversification, diets have not changed much; rather, the surplus is invested in other forms of consumption expenditure (Rao and Charyulu 2007). PDS by releasing funds from main sources of calorie consumption is likely to have played some role in enabling this shift.

The demands from PDS could thus be affected in several ways: first, directly by i) determining what products would be preferred; and ii) by affecting purchasing power of non-energy rich food. Second, through subsidy the savings could be utilized for purchase of more preferred food of higher quality or different cereals, non-cereal food and even non-food (Kishore et al. 2015).

There are two final points that need stating. First, poverty is a major indicator of food insecurity. Addressing poverty is an important first step but is unlikely to be enough for food security. Recent economic growth and government welfare initiatives have contributed to a reduction in poverty. According to Planning Commission estimates (2014), poverty decreased from 38.2 percent to 29.5 percent between 2009 and 2010 and between 2011 and 2012. Yet, India faced enormous challenges related to food insecurity and hunger for a sizable population. While largely chronic, the problem of hunger is intensified during natural calamities such as floods and droughts, but equally in situations of conflict. Apart from economic factors, there are issues of physical and social access as well as attributes of food, such as safety and nutritional value that play a part.

Using Sen (1981) (which I discuss in section 2.5), I attempt to synthesize some of the analytical concepts that inform my thesis in trying to understand how needs and preferences are shaped by how rights-holders access their entitlement, and the heterogeneity therein.

2.2 Social protection and food security

At the outset, one of the relevant concepts in understanding the formation of needs and preferences in relation to SSNP is related to social protection. Social protection is concerned with protecting and helping those who are poor and vulnerable, such as children, women, older people, people living with disabilities, the displaced, the unemployed, and the sick. There are ongoing debates about which interventions constitute social protection, and which category they fit under, as social protection overlaps with several livelihoods, human capital and food security interventions (Harvey et al. 2007).

Social protection is commonly understood as ‘all public and private initiatives that provide income or consumption transfers to the poor, protect the vulnerable against livelihood risks

and enhance the social status and rights of the marginalized; with the overall objective of reducing the economic and social vulnerability of poor, and marginalized groups' (Devereux and Sabates-Wheeler, 2004; pp. iii). Social protection is usually provided by the state; it is theoretically conceived as part of the 'state-citizen' contract, in which states and citizens have rights and responsibilities to each other (Harvey et al. 2007).

Devereux and Sabates-Wheeler (2004) provide the most commonly used conceptual framework, which describes the following social protection functions:

- Protective: providing relief from deprivation (e.g. income benefits, state pensions)
- Preventive: averting deprivation (e.g. savings clubs, social insurance)
- Promotive: enhancing incomes and capabilities (e.g. inputs).
- Transformative: social equity and inclusion, empowerment and rights (e.g. labour laws)

Devereux (2000, pp.6), classifies the following categories of anti-poverty interventions that are relevant from the point of view of a SSN: i) livelihood promotion, involves bringing people out of poverty by raising "their income generating potential"; ii) livelihood protection, provides "consumption support to people subsiding below a given poverty line" social safety nets, iii) "livelihood protecting interventions that support vulnerable people whose incomes decline suddenly, but they can also have longer term livelihood promoting impacts."

Devereux (2016) also argues that there is a close relationship between social protection and food security. Devereux and Sabates-Wheeler (2004) expand the definition of social protection to include addressing social injustice and exclusion, an attribute that is most relevant in the context of India. These impinge on access to food at a given point in time as well as on vulnerability. Moreover, over time the thinking on social protection has evolved to emphasize graduation and self-reliance where households are enabled to meet their needs consistently irrespective of the handouts and can withstand shocks. For example in 1980s it was seen as a "safety net" providing subsistence support to individuals in extreme poverty (Mkandawire 2001: 1 as cited in Babajanian 2013, pp. 4). However, in mid-2000s social protection discourse went "beyond poverty relief and livelihood maintenance and became a

“policy tool for promoting far-reaching improvements in human well-being” (Babajanian 2013, pp.4).

‘Safety nets’ as described above are a form of social protection which help people meet immediate basic needs in times of crisis. Typical short-term goals are to mitigate the immediate impact of shocks and to smoothen consumption. The World Bank has a slightly different definition of ‘safety nets’ as social assistance programmes (Gentilini et al. 2014). Other forms of social protection aim at longer-term development and enabling people to move permanently out of poverty (Babajanian et al. 2014).

PDS encompasses all the objectives of an SSN. The role of PDS lies in reducing poverty and inequality, managing risks during shocks including the changes due to economic reforms which creates winners and losers. To the extent food security and nutrition is important for human capital formation, PDS plays a role in the objective of harnessing human capital as well. Note that the role of PDS vis-à-vis the objective of poverty reduction that takes one of two forms: reducing the incidence of poverty and reducing the depth of poverty. It is possible that PDS might not lift many households out of poverty but could play important roles in affecting the depth of poverty. PDS also relates to the idea of correcting for entitlement failure; note that entitlement protection is narrower than livelihood protection referring mainly to the social safety net function.

2.3 Social exclusion

In India, over the past decade, in response to grassroots mobilization and advocacy, the state has increasingly moved away from a welfarist (needs-based) approach, which involved large exclusion and inclusion errors that determines who gets included or excluded from the programme (Deaton and Dreze 2002), to creating a rights-based framework for entitlements. In the context of an SSNP and particularly in relation to a rights-based approach as reflected in the Right to Food (Chapter 1), social exclusion is an important consideration (Babajanian and Hagen-Zanker 2012; Babajanian 2013). This is important for ensuring the dignity of human beings, their right to live a healthy and fulfilling life, as deprivation is often a result of discrimination across generations, rather than an individual flaw (Thorat and Sadana

2009). In this sense, the National Food Security Act (NFSA), 2013, at least in ideological terms, replaces relations of patronage with a legitimate claim or right of citizens.

In my thesis I use a broad definition of social exclusion, which as pointed by Babajanian and Hagen-Zanker 2012 originated in European social policy literature but has since been applied in developing countries quite extensively. Social exclusion relates to inadequate participation of individuals in key aspects of their society that may include SSNP as well. Exclusion is multidimensional and refers to multiple forms of economic and social disadvantage caused by a diverse set of social, economic, geographical, environmental and cultural factors (Burchardt et al. 2002). Sabates-Wheeler and Devereux (2008) consider social exclusion as a manifestation of vulnerability, alongside discrimination and violation of the rights of minorities. The extent of exclusion often depends on individual and community characteristics and drives attention away from attributing poverty to personal failings and directs attention towards societal structures (Gore and Figueiredo 1997). Thus, the social exclusion framework can help situate programmes like PDS in the specific economic, social and institutional milieu that affects how a programme can address different dimensions of deprivation and their underlying causes.

Specifically, in my thesis, exclusion is based on the extent to which poor and/or powerless groups' eligible households are excluded either by design (example, the eligibility criteria) or due to implementation (example- frequency of the opening hours of PDS shops) (see de la Brière and Rawlings 2006 for inclusion in the context of conditional cash transfer (CCT), Ellis 2008; HelpAge International 2011).

Where social exclusion becomes an important concept is because SSNP must tackle beyond economic insecurity that is societal goals of equity, social justice and empowerment (Sabates-Wheeler and Devereux 2008). In programmes like PDS, social exclusion provides a relevant context for understanding vulnerabilities. Its application allows greater emphasis on the local context in determining deprivation. Social exclusion is a dynamic process that 'precludes full participation in the normatively prescribed activities of a given society and denies access to information, resources, sociability, recognition, and identity, eroding self-respect and reducing capabilities to achieve personal goals' (Silver 2007, pp. 1).

2.4 Poverty, vulnerability and food insecurity

The emphasis of safety nets conceptually is on “preventing people from falling into poverty”, not on “promoting them out of poverty” (Hoddinott 1996, pp.3). Further, SSNP in general could have both livelihood protection as well as livelihood promotion impacts. Livelihood protection role of SSNP specifically relates to addressing vulnerability. PDS can play a protective role by preventing people from falling into poverty if they were not poor to begin with. Guhan (1994) highlights the importance of PDS like preventive measures to avert deprivation.

The most basic definition of food security is a state when “all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life”, proposed at the World Food Summit in 1996 (FAO 2003). The problem of food insecurity is multi-dimensional and interconnected. It involves food but equally broader visions of wellbeing and freedoms (Sen 1999). Food insecurity is closely related to poverty and vulnerability, especially among farming rural households and the urban poor. The persistent discrimination of the poor, scheduled castes and tribes in India, and women within these groups, inhibits their enhanced sense of choice or wellbeing (Rao 2014). Ensuring food security encompasses more than just current nutritional status, capturing also vulnerability to future disruptions in access to adequate and appropriate food (Barrett 2010, pp. 825).

In recent years there has been an increasing awareness that the analysis of food insecurity should be carried out in a dynamic context by looking at both the current incidence of hunger and inadequate nutrition but also the risk of suffering them in the future. The concept of vulnerability applied to the context of poverty (Holzmann and Jørgensen, 2000) is increasingly been realized in the context of food security (Løvendal, Knowles and Horii, 2005 cited in Scaramozzino 2006). I rely on outcome approach to vulnerability as in Chaudhari (2003) that is based on expected poverty or food insecurity. Vulnerability to food insecurity like vulnerability to poverty is a stochastic or random or not purely deterministic phenomenon (Chaudhari 2003). In other words, poverty per se is a very contemporaneous concept, of relating to the present. Vulnerable households move in and out of poverty depending on the nature of the shock. Any shock (example flood, drought, food grains price

fluctuations) can push them below the poverty line. Krishna (2008, pp. 949) define the poor as “an ephemeral category with highly porous boundaries. Many who are poor at a previous point in time are not poor later, and vice versa. If there is large enough adverse shock (example drought, flood, price fluctuation), the non-poor can slide into poverty and food insecurity.

As another conceptualization of vulnerability, Chambers (1989) describes it as exposure to contingencies and stress, and difficulty in coping with them. Vulnerability itself has two sides: an external side of risks, shocks, and stress to which an individual is subject; and an internal side which is defenselessness, meaning a lack of means to cope without damaging loss. Wisner et al. (2004, pp. 11) however reminds us that the concept of vulnerability needs to be qualified to “uncover the deeply rooted character of vulnerability rather than taking the physical hazards as the starting point.” The authors define vulnerability to mean the characteristics of “a person or group and their situation that influence their capacity to anticipate, cope with, resist and recover from the impact. It involves a mix of factors that determine the degree to which someone’s life, livelihood, property and other assets are put at risk.” They recommend that in analysis of vulnerability, social and economic factors are the most crucial.¹⁸

Yet, in dealing with vulnerability, capacity for self-protection and group action and processes that generate people’s capacities to resist, avoid, adapt to those processes, and to use their abilities for creating security need to be accounted for (see chapter 6, section 6.5).¹⁹ Among the poor and food insecure there are some who are transitorily in that state and some who are likely to remain in that state over time. It is to be noted here that household’s (or an individual’s) observed consumption is an ex-post measure of poverty and/or food insecurity

¹⁸ See Cannon (1994, pp. 19.) who defines vulnerability as “a characteristic of individuals and groups of people who inhabit a given natural, social and economic space, within which they are differentiated according to their varying position in society into more or less vulnerable individuals and groups. It is complex characteristic produced by a combination of factors derived especially (but not entirely) from class, gender and ethnicity”.

¹⁹ For example, “In India, over the last decade or so, institutional responses through women’s collectives have helped to mitigate the problems confronted by FHHs and to strengthen their agency. One such example is the *Ekal Nari Shakti Sangathan* (ENSS, or Single Women’s Power Collective). This group has organized single women and enabled them to claim entitlements such as pensions and ration cards, fight against sexual harassment and other discriminatory caste and community practices (Srivastava and Chaudhury 2011; Berry 2011), and create new leadership to advocate for their rights.” (as cited in Rao, Pradhan and Roy 2016, pp. 12)

(Chaudhari 2003), Current state therefore may or may not be a good indicator of the vulnerability to poverty or food insecurity in the future.

2.5 Food access: Sen's entitlement approach and PDS

Food availability is an essential, but an insufficient condition for assuring access to food. Sen (1981) in his book on "Poverty and Famines" pointed out that the availability of food in the market does not entitle a person to food. This new approach explained that famine was not the result of lack of food, but the difficulty faced by households in accessing enough food. Sen outlined different ways in which entitlement failures could take place leading to lack of access to food. The entitlement approach relates vulnerability to inadequate access to assets including human and social capital. In Devereux (2001, pp.246), "the most valuable contribution of the entitlement approach to famine theorizing is that it shifts the analytical focus away from a fixation on food supplies—the Malthusian logic of "too many people, too little food"—and on to the inability of groups of people to acquire food. There also is vulnerability assessment based on sustainable livelihood approaches (Devereux et al. 2003,).

Access thus "reflects the demand side of food security, as manifest in uneven inter- and intra-household food distribution and in the sociocultural limits on what foods are consistent with prevailing tastes and values within a community. Access also accentuates problems in responding to adverse shocks such as unemployment spells, price spikes, or the loss of livelihood-producing assets. Through the access lens, food security's close relationship to poverty and to social, economic, and political disenfranchisement comes into clearer focus. Hence access is an inherently multidimensional concept." (Barrett 2010, pp. 825).

In Sen's (1981) 'entitlement approach' the entitlement failures occur in - production (what one grows), labor (what one works for), trade (what one buys) and transfers (what one is given). In PDS as an entitlement, it relates to one based on trade and transfers. The approach is pertinent for needs assessment in PDS by understanding the factors leading to entitlement failure. PDS captures the elements of exchange and legal entitlements. In the context of PDS, it occurs where the person or household does not get the amount and type of grains mandated, mainly due to diversion by the PDS dealers, a case of entitlement snatching. Greater entitlement snatching happens when the market price is comparatively high i.e. when

arbitrage is more profitable²⁰. At the same time, high market prices also motivate rights-holders to seek their entitlements more vociferously, a case of entitlement fetching (Dreze and Sen 2013).

Consider the governance structure of the PDS system that has a direct bearing on the experience of accessing food entitlement. Generically, food subsidy programmes in developing countries including India are often rife with corruption and pilferage (Mehta and Jha 2014).²¹ Data from the nationally representative National Sample Surveys show that the diversion of rice and wheat from the PDS decreased from 54 percent in 2004–2005 to 38 percent in 2011–2012, even as arbitrage potential increased sharply (Chakrabarti et al. 2016). Overall, Chakrabarti et al. (2016) show that a rise in the market price or an increase in arbitrage potential because of a greater gap between the market price of cereals and the PDS price leads to a significant reduction in the quantity of PDS rice and wheat that households can buy. At the same time, quite an opposite relationship has been found in well governed states. Hence, conceptually both entitlement fetching as well as entitlement snatching are important to be looked at. One of the most important components shaping the preferences/needs regarding the PDS can be the effectiveness of governance.

Sen's entitlement approach also points to the interlinkages between ownership, exchange and legal entitlements in shaping outcomes. Movement in relative prices accounts for shifts in exchange entitlements. Any price intervention like through PDS are important for the poor in reducing the real cost of essential commodities, especially staple food. Eliminating food subsidies for consumers without introducing compensation can raise poverty, so that many households which were previously able to acquire a minimum basket of basic goods and services can no longer do so (Devereux 2000).

²⁰ Arbitrage is the practice of taking advantage of a price difference. For example, an arbitrage is present when there is the opportunity to buy something for a low price and sell it for a higher price.

²¹ NFSA which has been implemented in the three states (my research sites), significantly increased the price arbitrage in PDS by promising a monthly ration of 25 kg of coarse cereals, wheat, or rice at INR 1, 2, or 3 per kg, respectively, to nearly two-thirds of all households. This change implies that the average price in the open market was now six to seven times higher than the subsidized price in the PDS.

Note that even though the Government of India sets the retail price of subsidized items sold through the PDS, state governments use their own budgetary resources to reduce prices even further. Odisha for example has offered price 2 rupees cheaper at Rs 1/kg.

In their theory of access Ribot and Peluso (2003, pp. 1), define access as "the ability to derive benefits from things," broadening from property's classical definition as "the right to benefit from things." Access, following this definition, is more akin to "a bundle of powers" than to property's notion of a "bundle of rights." With this formulation, access includes a wider range of social relationships that constrain or enable benefits from the programmes. This characterization of access underlines the heterogeneity that gets reflected in the needs and preferences of different groups of people.

Many mechanisms have been devised for protecting food security in such contexts. These include insurance programmes, employment opportunities or guarantees on public works programmes, food aid or other transfers. Food insecurity can be addressed most directly by giving food to insecure people (food transfers) or the purchasing power to access food (cash transfers). Conceptually this is the role that PDS plays i.e. raising the access to food and with lower cereal prices raising the purchasing power overall.

2.6 Social protection systems and mechanisms

2.6.1 PDS as India's SSNP: The system of transfers with different delivery mechanisms

Safety nets programmes in India redistribute income to the poorest and most vulnerable, with an intent to impact poverty and inequality. With the objective of adequate provision for the poor, SSNs differ in the ways in which these should be achieved. In terms of SSN in India, livelihood protecting interventions (see section 2.2 for Devereux 2000) clearly include consumption support systems like the PDS while catering particularly to people subsisting below a given poverty line, either chronically (the core poor) or temporarily (the transient poor'). Households facing hard times or losses are helped by such systems to preserve their level of consumption and wellbeing. Further details on the frameworks for the roles of social safety nets in addressing poverty and vulnerability can be found in Bastagli et al. (2016); Devereux and Sebastes-Wheeler (2004); Grosh et al. (2008); Tirivayi, Knowles, and Davis (2013); and World Bank (2012). Note that often the form of SSN just relates to the preferred delivery mechanism for achieving the same objective, for example an in-kind transfer of food versus an equivalent cash transfer to access food over which the stakeholders can have differential preferences.

2.6.2 Mechanisms for transfers - the system of cash transfers

In the last few decades, there has been a growing interest in the use of cash transfer (CT) programmes to achieve developmental goals, in contrast to direct provision by the government. While Latin American countries such as Mexico and Brazil have been pioneers in this area, the CT approach is also becoming increasingly popular in other developing countries. The Government of India (GOI) has recently launched the ‘Direct Benefit Transfer’ (DBT) that aims to reduce leakages in welfare programmes by directly transferring the benefits to the rights-holders’ account. As of now, the GOI has started implementing the DBT only for scholarships, pensions and similar social security programmes. However, there is a possibility that other programmes will also be brought in the ambit of DBT such as in-kind transfer (IKT) in food Grains will be eventually replaced with a CT programme.

The proponents of the CT approach (e.g. Kapur et al. 2008) argue that most in-kind transfers (IKTs) have failed to deliver simply because their implementation requires administration capital that is comparatively scarce in developing countries. Other criticisms against IKTs include various forms of corruption and leakage, supply of substandard quality, and to the extent local governments are involved, political bias in distribution (see Ghatak et al. 2013).

The supporters of IKTs, on the other hand, point out many disadvantages inherent in a CT programme—misuse of money, price fluctuations in markets, greater vulnerability of women and elderly --and lack of adequate infrastructure (Khera, 2011; Ghosh 2011; Shah 2008). The government plan is to replace IKT programmes – including the PDS – with a CT programme in future. The debate over whether to provide food assistance and the form that assistance should take has been ongoing for some time (See Chapter 7, section 7.3 for a detailed discussion on cash transfer).

Hoddinott et al. (2014) argue that although many studies look at the impact of providing either food or providing cash, there is remarkably little rigorous evidence directly comparing the impact of in-kind food assistance with cash transfers. Between 2010 and 2013 the International Food Policy Research Institute, in partnership with the World Food Programme, undertook a study comparing impact of cash, food, and vouchers on household

food security in Ecuador, Niger, Uganda, and Yemen (Hoddinott et al. 2013). The study uses experimental design to assess the causal impacts.

The main message is that there is no one “right” form of food assistance transfer. The relative effectiveness of the three mechanisms is context specific and seems to depend on state of the markets. In three of the four countries (Ecuador, Uganda, and Yemen), cash had a larger impact than in-kind-transfer on improving dietary diversity; in the case of Ecuador, it was vouchers that did more than IKT to improve diet diversity. Yet in Niger, IKT of food had a larger impact on dietary diversity. Also, in two countries (Ecuador and Yemen), IKT did the best to increase the quantity of calories available for households’ consumption.²²

In terms of the preferences, there is no evidence that rights-holders always prefer one type of modality. Instead, rights-holders’ preferences also depended on context. The multi-country study found no evidence that rights-holders sell their food transfers nor is there evidence that cash transfers are used for undesirable purposes such as buying beer (Uganda) or *qat* (Yemen). In India, Ghatak et al. (2013) look at CT programmes, rather than direct provision by the government, to achieve a developmental goal. Though the safety net that they look at relates to human capital strengthening (CT for school going girls to buy bicycle) the conceptual insights from the study are quite relevant for CT in food. Conceptually then it is not adequate to compare preferences in a binary way i.e. cash versus kind but to consider other possibilities like coupons.

In contrast to food aid, cash can be more flexible and able to meet diverse needs. The CT programmes however have faced problems for example in Africa by failing to take inflation or price seasonality into account. Other problem CT may face relates to constrained supply of food when markets are thin or are fragmented. Also, CT might not be the best option in times of high food price volatility. According to Devereux (2012) in Kenya’s Hunger Safety Net Programme (HSNP), during the food price crisis of 2008, CT could buy only one-third of the food basket against which it was calibrated within 18 months of the programme’s inception in 2007. Cash transfers in Ethiopia also faced similar challenges.

²² Excluding the cost of procuring food, the results from the study suggest that cash transfers are cheaper to deliver than food.

Ghatak et al. (2013) argue that a wide range of factors can influence households' preference for cash versus kind: the programme design, its implementation, households' socio-economic characteristics, and access to markets. These factors can be classified into two categories: the demand side and the supply side. The demand side includes factors such as household (inter alia income, education, household size) and village characteristics (caste composition, governance structure). The supply side includes factors that determine the effectiveness and efficiency of the programme. Conceptually in cash versus in-kind transfer debate several attributes have a role to play such as the following (Ghatak et al. 2013):

- (i) Conditionality: Whether the cash transferred comes with a condition or not,
- (ii) Timeliness in payment,
- (iii) Adequacy of money in meeting the intended need, i.e. whether the inflation indexation is there that preserves the purchasing power. The inadequacy of the transfers might make households less likely to support a CT programme. Rights-holders who are poor or facing short-term liquidity constraints may not like this programme even if it performs well in terms of reducing leakages.

Ghatak et al. (2013) also believe that households with self-control problems and intra-household conflict may prefer IKT as it works as a commitment device, assuming resale is not an easy option. Because of the conditions required for ease in benefiting from CT, rights-holders belonging to richer households are more likely to prefer cash over kind than poorer households. Moreover, rights-holders who are in remote places where markets are not well developed may be less likely to prefer cash over kind unless they are compensated for travelling to banks.

There is little empirical evidence on the performance of a CT programme which replaces an existing IKT programme. The empirical basis for the arguments for or against the CT programmes have generally been based on the performance of the existing IKTs: poor functioning of an IKT over a long time is seen as an evidence in favour of the CTs; however, an improvement in the performance of a IKTs due to better design, or general improvement in governance, is used to argue against the need for CTs to replace IKTs. Some Indian states have tried CTs recently – in some cases, only a pilot if not a universal programme.

A CT system may also solve the collective action problem as a coping strategy (chapter 6). In a socially differentiated setting, collective action against the dealer to secure entitlements is less likely due to dominant sense of other identities—caste, religion, gender and other program related grouping APL, BPL and AAY. In case of CT, to the extent that the dealer's role and interface with him or her is minimized, there is a greater chance for collective action.

Also, since demand side factors play a role, even a well-functioning cash transfer programme would affect rights-holders differently. Hence, it is imperative to study rights-holders' preference between different forms of transfers: unconditional cash transfers (UCT), conditional cash transfers (CCT), and IKTs -- for different types of goods and services to identify factors that play an important role in shaping their preference regarding the form in which they would like to receive benefits from the government. This information would be very useful in designing transfer programmes in a way that responds to people's need. For example, areas where market access is not easy, CTs are not going to be very effective. In contrast, in areas where the administrative capacity is weak and there is limited accountability, CTs may be good for the rights-holders (Ghatak et al. 2013).

To summarize, SSNs are meant to provide compensation, relief or coping mechanisms to groups considered vulnerable. Note that just as SSN contribute to achieving each of these goals, there remain other tools to achieve them in alternative ways (Holtzman 2009). Hence, the specific design choices made and methods of implementation of SSN may affect whether these programmes achieve their stated goals and would affect the uptake of the programme.

2.7 Governance: protective systems

Though I have dealt in detail in Chapter 5 with the debate around governance structure at the local level (decentralisation and social affirmative action), here I briefly note the changes in governing structures introduced since the enactment of the NFSA 2013. Conceptually, this relates to the protective institutions such as of grievance redressal as NFSA brings in the right to food with the legal system backing it. Yet, there are issues of implementation which affect the ability of the system in terms of on meeting the needs and preferences of the rights-holders.

2.8 Needs (and preference) assessment in relation to a SSNP

Above I have emphasized the objective of meeting needs and preferences several times in case of the PDS without considering them as technical markers because several contextual factors such as exclusion, governance and delivery mechanisms needed to be laid out before. Needs assessment relates to subjective approach in social indicators research as opposed to the objective approach, which focuses on measuring “hard facts”, such as income or amount of food secured. The subjective approach considers matters such as satisfaction with income and perceived adequacy of provisions (Veenhoven 2002, pp.1). “The subjective approach is akin to the psychological stream found in economic indicators research, which monitors things like consumer trust and subjective poverty” (Katona, 1975; VanPraag et al. 1980, cited in Veenhoven 2002; pp.1).

A needs assessment has to make a distinction between individual and social needs. Fraser (1987) studies the relationship between needs, claims and rights from a feminist perspective. Feminists have demonstrated that authoritative views purporting to be neutral and disinterested express the partial and interested perspectives of dominant social groups. In that, the assessment of social needs would reinforce societal patterns of dominance and subordination. Normatively good need interpretations are those that do not disadvantage some groups of people vis-à-vis others. Fraser (1987) summarizes the nuance in needs assessment as involving balancing democracy and equality.

What roles do needs, and preferences play in the engagement of the community in relation to the PDS? Economists have also reflected that the decision situation for appropriate behaviour depends on individual needs and preferences (Bowles and Polania-Reyes 2012). Decisions like how and when to access PDS and what for would depend on individual needs and preferences. Individual needs and preferences in turn are a function of different socio-economic factors such as purchasing power and social contexts (example gender, caste, class. See Chapter 4).

Here, it is also important to distinguish between needs and demand, the latter being a technically defined concept in economics. Demand is a want or need accompanied by

willingness and ability to pay. In the context of PDS, the assessment of needs does relate to the demand side, but it is not a demand assessment, as ability to pay in general is not there, unless there is sufficient subsidy, though willingness to pay might be there.

In addition, some may also think of needs talk as an alternative to rights talk. A food subsidy as in the PDS might be treated as a matter of need but with the right to food firmly established it could also be taken as a right. Rights have legal and constitutional support while the individual/household need assessment that I focus on are based on individual/group characteristics and the environment that they are in, and only a part of it could be treated as an individual or social right. In the context of Fraser's (1987), characterization of rights claims and needs claims could be mutually compatible, even inter-translatable. In my case they are only partially transferable.

2.8.1 Conceptual framework

The conceptual framework below (**Figure 1**) makes a case for needs assessment of an SSNP like PDS. It draws from Amartya Sen's 'entitlement approach' (Section 2.5) where the sources of food and nutrition (in) security can be characterized as entitlement failures.

2.8.2 Conceptualizing heterogeneity

Given the importance of heterogeneity, I unpack its different meanings here. The dictionary meaning of heterogeneity refers to the quality or state of consisting of dissimilar or diverse elements. According to Merkel and Weiffen (2012, pp.389), the concept of 'heterogeneity' is broad and is distinct from 'diversity' in that heterogeneity refers to the socio-cultural complexity and differentiation of social structures, while diversity denotes "inclusion of different types of people (for instance, people of different sex, race or culture) in a group or organization."

There are several possible perspectives from which heterogeneity in the context of a SSNP in general and PDS can and should be examined. In the context of PDS, the issue of heterogeneity pertains to diversity in access, utilization and derivation of benefits from it. Heterogeneity in the context of my research also implies that underlying conditions differ

across households and the same policy change or external environment can result in significantly different outcomes. Heterogeneity of the impacts could also be reflected in terms of the difference between short run and long run. In the long run there is learning as well as policy responses which can diminish the effects of heterogeneity.

Heterogeneity among participants results in differences in how they access interventions or even in outcomes. It plays the role of effect modifiers where effects of any intervention can vary based on characteristics (gender, social identity and coping strategies). Thinking through heterogeneity in case of PDS involves considering whether very different populations are receiving the intervention or can receive the benefits. To achieve meaningful and cost-effective outcomes from SSN like the PDS, requires that treatment of heterogeneity must be taken seriously and should be a factor in both design as well as implementation.

Towards this end it is critical to assess whether heterogeneity is present, how much and of what type. This information is essential for uptake of the programme, flow of benefits from the programme and its sustainability. If substantial heterogeneity is found, corroborated by revealed preferences, a different course of action may be taken. Incorporation of location-based heterogeneity based on identities such as caste, class, gender requires subgroup analysis like gender, caste (even clan) or class.

Drawing on Sen's entitlement approach which points to the interlinkages between ownership, exchange and legal entitlements in shaping outcomes, UNICEF's framework (Annex 1) aims to understand the drivers of under nutrition, accounting for age and gender-specific vulnerabilities and how these result in changes in needs and preferences. I adapt this framework, laying emphasis on heterogeneity even within a context in shaping outcomes. Before I explain my framework, the first issue that I try to understand is the degree of relevant heterogeneity and its determinants.

2.8.2.1 Heterogeneity, food culture, food politics and the public distribution system: Inter-disciplinary perspectives

The core of needs assessment is heterogeneity across households which can be examined from several perspectives - anthropological, economics or institutional analyses. What

institutional factors accounts for variation in provision of PDS services across states, districts and even villages? There are differential effects of democracy and democratization on social policy across my sites. It has engendered differential incentives among the agents of governance to compete and sometimes collude with delivery agencies for the PDS. Further, institution induced heterogeneity can bring forth freedom for previously excluded groups to organize and it varies by the extent of effective democratization particularly at the grassroots level. There are institutional heterogeneities conditioned by both long-term historical factors and policies.

Anthropologists have long documented substantial and persistent differences across social groups in the preferences for foods. Prakash (1961) notes that the relative preference for wheat in Northwest India and rice in East India dates to the first millennium AD (Atkin 2016). The types of food a group of people traditionally consumes embody the preferences, beliefs, and social attitudes. Culture matters not only for the preferences over food but also over delivery systems. Anthropologists look at food relating to other aspects of social life such as culture and community life. India in general and the three states that I study as well comprise many different food cultures across religious, caste, and ethnic groups.

Atkin (2016) uses the empirical strategy of migrant households to identify the role of food culture in nutrition. Migrants face the same food prices as their neighbours but bring their cultural food preferences with them when they migrate. This variation is used to identify the impact of culture on food consumption and ultimately nutrient intake. However, this assumption of neighbourhood determined prices is often not correct in rural and even urban India where because of several socio economic and cultural factors households even in close vicinity do not face the same prices (Acharya et al. 2012).

Dirks and Hunter (2012) analyse the elements of food culture comprising aspects of self-sufficiency, sharing and interface between community and provider (e.g., government, community). Drawing from anthropological insights, my hypothesis is that as aspects of social life differ across population groups, it also engenders heterogeneity in food cultures including in ways people access SSNP and utilize them for their wellbeing.

Dirks and Hunter (2012) further posit that the ability to access and consume nutritious food is also a function of the relationships with other members of the society, as a family member,

a member of group or community and even as a citizen of the state with corresponding rights and duties. In economic terms they note that food access can come from own sources and through purchase but also through social exchange such as loaning or gifting. How the existing social relationships determine food access, needs and utilization both from PDS as well as non-PDS sources would impinge upon in the needs/preferences about the PDS itself.

Another line of thought brought up by anthropologists deals with how both material conditions and symbolic representations (for example status of fine cereals vis-à-vis coarse cereals) lead to classification of high and low food (Goody 1982). Because PDS usually delivers low quality and is a food assistance programme, Swaminathan (2000) argues that participation in a targeted scheme (such as PDS) may be associated with stigma. Since the relationship between local providers and rights-holders is a social exchange, it can affect the outcomes related to the PDS.

Some recent studies (MacClancy et al 2007) discuss the acceptability of food-based programmes on social and cultural norms. Consider, if coarse cereals were to be provided, it is possible that some social groups might not take them up because of social or cultural norms, their nutritional benefits notwithstanding. This is pertinent because uptake in PDS is not uniform. Multiple datasets such as ICRISAT's Village Dynamics Studies in South Asia (VDSA) data as well as the survey in my thesis shows: for some households the uptake is quite low, irrespective of their entitlements.

Also, in the case of PDS, it is important to realize its historical context, the roles it has played in socio-cultural life and the effects it could have on needs/preferences now. Sutton (2001) states that food conveys memories and leads to historical consciousness. In relation to PDS, there is likely to be recall about how it was formed considering acute scarcity of food and hunger, what purposes it served over time and what role it played given the social milieu. Further Sutton (2001) argues that food symbolizes identities, religious, cultural among others. How food is provided and how it is accessed might itself symbolize identities that would be revealed in varying needs/preferences in relation to the PDS. Hence, based on caste affiliations who wants to be putting effort in accessing subsidized grains, who wants to get delivery from someone socially lower are pertinent cultural issues that need to be incorporated.

In a related context, some cross-cultural studies in Anthropology of Food have tested the theory that fluctuations in food supply helped explain annual rituals of conflict (Dirks 1988) and Ember and Ember 1992) and the cultural value placed on social cooperation (Poggie 1995). These indicate that consistent or sporadic scarcity of food particularly in low income settings formed a basis for large number of conflicts and obviated much of social cooperation, otherwise the norm in traditional societies.

Whether high or low intensity conflict due to differences because of caste, religion or ethnicity, these can disturb social cohesion and can have a profound effect on a safety net system like PDS, people's engagement with it and its valuation. Low or high intensity conflict leading to food scarcity can also make competition for food lead to variation in realization of entitlements from the PDS.

Overall, anthropological studies provide important insights towards understanding PDS as part of a food culture. The relationship is bidirectional where the food culture itself has been shaped by the existence and changes in such a large system such as the PDS.

2.8.3 Dietary changes and valuation of the PDS: The nutrition perspective

India is clearly far along in the nutrition transition (Dang and Meenakshi 2017). Just as there have been rapid increases in the proportion of adult women in India who are overweight and obese: a large proportion of adults and childhood undernutrition remains a public health problem (FAO 2006). The intra-household dual burden of malnutrition is also increasing. The nutrition transition that is happening differentially across regions can lead to heterogeneity. A large population remains calorie deficient with dependence on subsidized food (from PDS) for energy supply, i.e. they remain in the earlier stages of nutrition transition making PDS (focused on cereals) relevant.

Yet, over time for segments of the population, the relative importance of PDS itself is likely to have been altered and therefore its valuation. As discussed in chapter 1, there is ample evidence that consumption baskets are getting diversified with declining importance of starchy staples and rising consumption of protein rich (excluding pulses) and micro-nutrient rich food (Birthal et al. 2014). At the same time how, dietary diversity (commonly a need

among the not so well nourished) is being affected because of PDS remains a largely unaddressed question (see Kishore et al. 2012).

2.8.4 Framework linking heterogeneity to needs and preferences

Heterogeneity results in differences in how beneficiaries or right holders access PDS. It is central to understanding the effect of social heterogeneity, like gender, caste and class in accessing PDS. Thinking through heterogeneity in case of PDS involves considering factors that affect households differently across different dimensions of access.

I look at a composite of factors from different perspectives leading to heterogeneity which as discussed is likely to be important for functioning of the programme. **Figure 1** presents a simple conceptual framework depicting the factors leading to heterogeneity resulting in a basis for needs assessment in the PDS. It draws from Amartya Sen's 'entitlement approach' where PDS is an entitlement, specifically one based on trade and transfers.

Sen's entitlement approach (section 2.5) points to the interlinkages between ownership, exchange and legal entitlements in shaping outcomes. I have further adapted this framework, laying emphasis on the heterogeneity even within a context in shaping outcomes. Hence, the first issue that I try to understand is the degree of relevant heterogeneity and its determinants. In terms of Sen's paradigm, the first **Box A (in Figure 1)** for preconditions presents the set of different household, community and institutional characteristics that comprise the basic factors resulting in entitlements leading to food and nutrition security. The different characteristics, for example, are:

- 1) At household level they comprise assets, income, and education;
- 2) Community level includes social cohesion, social norms, cultural taboos and practices;
- 3) Institutional and policy level consist of legal rights, government policies relating to production for example input subsidy.

These factors interactively lead to preconditions that broadly are:

- 4) Consumption related for example to price regulation and
- 5) Distribution related to provision of outlets to distribute food, banks to provide credit, cooperatives. These lead to the proximate determinants of food security and nutrition (**Box B**) which are multidimensional in nature, as defined in UNICEF's conceptual framework. These include basic security of food, shelter, education and health; economic security about income, capital (if self-employed) and demand for food and legal recognition of rights like access to quality health and education services.

The distinguishing features of my conceptual framework include a recognition that both the preconditions as well as resulting proximate determinants of food and nutrition security together determine entitlements. However, some of the characteristics themselves can change over time or with context, for example legal rights in the community. Moreover, the elements in **Box B** that are a function of the preconditions can be subject to shocks such as drought, death of livestock, seasonal food price rises, leading to entitlement failure.

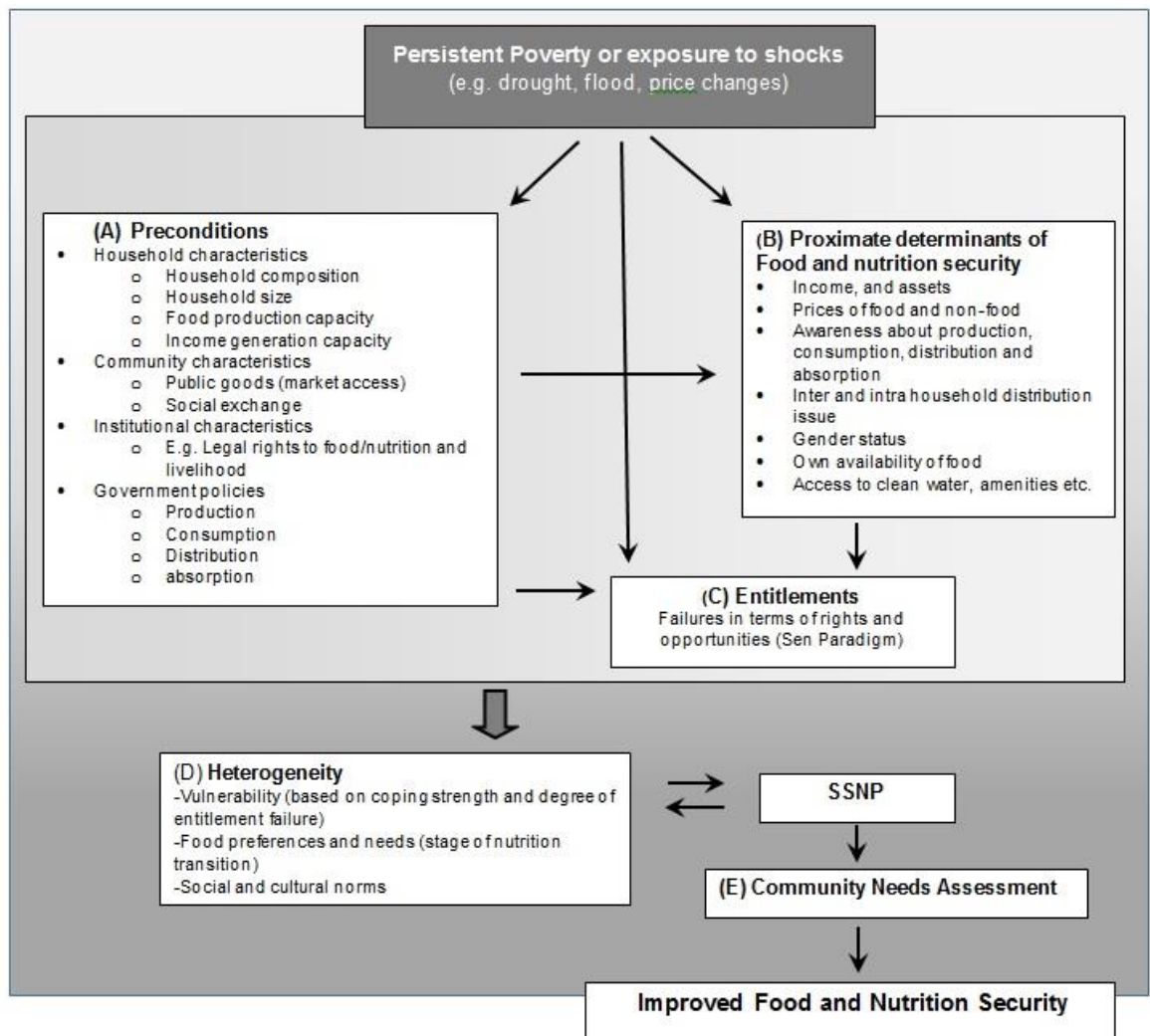
The conceptual framework highlights that entitlement failures are not uniform and can vary across communities and households. A host of individual, household and community characteristics individually and interactively determine the extent to which entitlements are compromised. As nature and degree of entitlement failure vary, it engenders heterogeneity that forms a basis for needs assessment. Note that different levels of vulnerability based on characteristics that determine the incidence of entitlement failure as well as coping strength to deal with it is itself a factor leading to heterogeneity.

Consider the interaction between how well household/community cope with entitlement failures and the factors listed in Box A. Sen's analysis of the Bengal famine of 1943 (1981/86) emphasized the issue of access or distribution wherein the failure of distribution systems due to withholding of surplus grains (by hoarding and profiteering) led to starvation. Hoarding and profiteering (as shocks) affects households differentially, leading to entitlement failure.

My hypothesis is that for PDS to address more effectively the issue of entitlement failure, it should be accounting for the incumbent heterogeneity, not just for efficiency and equity but also because it results in different forms of vulnerability. In terms of the experiences in relation to entitlement, there are both experiences of entitlement snatching offset in some

cases with entitlement fetching (in other words reactionary responses by the rights holders to avail their quota of food grains when the anticipated benefits of doing so are large enough. In this case the price difference for the food grains between the market and the PDS subsidized price is large that raises the stakes of the right holders, especially post the NFSA roll out), that then bears on preferences.

Figure 1-Conceptual Framework.



Source-Author's Illustration based on Sen's Entitlement approach and UNICEF's conceptual framework

What becomes clear is the importance of contextual factors based on socio-cultural, political and institutional environments that reflect the underlying heterogeneity. Contextual variables capture the characteristics of the population that disproportionately rely on the safety net, the structure of the market and safety-net services provided. The contextual

factors themselves have effects mediated through intersection of several factors. Gender for example would interact with caste and together would be a determining factor of access, elements of provision and quality of services. The contextual variables vary with high level of granularity even to the sub-village level. They relate to individual, household and beyond, for example, at the community level.

Further, according to Davidson et al. (2004) community variables that capture the social, economic, structural, and public policy environment determine access. Specifically, variables measuring the characteristics of the safety-net population and public policy support for the vulnerable matter. In relation to the PDS, the structure of the food market matter with vulnerability determining the safety net population. The size and characteristics of the safety net population varies by location with varying needs for some form of redistribution.

In this context, it is important to incorporate Chambers (1995) argument against the inherent reductionism of ‘poverty-line thinking’ and think beyond income-poverty, the idea of deprivation in which several socio-cultural, political factors play a role, thereby highlighting the importance of needs assessment.

In the areas that my thesis focuses on, majority of the population is engaged in rain-fed agriculture-implying high risks of income, human and social capital shocks making households vulnerable and subject them to experience of constrained purchasing power that threaten food security. Food insecurity is further exacerbated by food price seasonality.²³

Overall in the functioning of the SSNP, one of the important measures of success is how it helps the rights-holders cope with shocks. In dealing with shocks how the PDS performs relates to the issue of vulnerability. The experience of the rights-holders with PDS hinges significantly on how they can cope with shocks, alternatively how it reduces their vulnerability. Though PDS is designed to deal with chronic deprivation, the effectiveness of it as a safety net programme hinges critically on its ability to deal with shocks.

²³ Note that in my framework I do not delve into intra-household distribution of resources, but it remains an important issue in the context of rural India. Drèze and Sen (1989) label the intra-household redistribution of resources from ‘productive’ to ‘non-productive’ members ‘extended entitlements’; while Devereux (1993) uses the term ‘dependency entitlements’.

Needs assessments can be a fundamental component of a programme like the PDS. Throughout the life cycle of the implementation of the food subsidy programme, an assessment of the needs/ preferences can improve the timeliness and quality of the services and can also help implementers determine an effective response to the problems affecting the system. To assess the needs, it is imperative to recognize that it is mostly shaped by the process or experience of accessing ones' entitlement.

2.9. Summary

In this chapter I set out the conceptual framework, based on varied elements of heterogeneity that creates a basis for needs/preferences assessment. Some aspects of relative preference are captured in terms of the outcomes, for example the level of food consumption across systems and mechanisms can directly delineate the preferences related to the PDS. In general, apart from the outcomes, several process indicators are important for the needs/preferences assessment in the PDS. In reality because of heterogeneity, different mechanisms like food, cash and coupons for example are characterized by significant differences in terms of their order of preference. In my needs assessment, I capture the preferences not only over ideas but also over implementation.

There is clear motivation for rigorous needs assessment in programmes like the PDS. The levers for needs assessment are many and understanding them is likely to lead to greater cost effectiveness of the programmes such as the PDS. Just as needs in relation to the PDS have changed significantly over time or are changing, the contours of needs assessment are also changing quite rapidly. In the changing dynamics the expansion of needs assessment is needed to take place on both the intensive (deeper analysis of existing) as well as extensive margins (new systems and its traits). Also, in my data informational requirements and streamlining of administrative tiers comes out clearly in the needs and preference assessment, which I discuss later in more depth in my analytical chapters.

Chapter 3: Methodology, Data and Context

3.1 Methodology for analyzing experiences with the PDS and contingent needs and preferences

Central to my research is the issue of heterogeneity and differential needs. In chapter 2, I engaged with the debate around needs and interests, and preferences, given the centrality of these ideas to my thesis. In analyzing the needs, interests and preferences over the various attributes of the PDS, their determinants, subjective as well as objective valuation, I rely on mixed methods. A combination of quantitative and qualitative research methods maximizes the contributions of each method by building on their relative strengths to provide a richer pool of data and greater analytic power than would be available by using each method in isolation (Brewer and Hunter 1989; Creswell 1994; Creswell 2003; Tashakkori and Teddlie 2003; Creswell and Plano Clark 2007; Roelen and Camfield 2015).

Qualitative research methods overcome the constraints of quantitative survey methods, such as the necessity for only brief, close ended questions and responses, the ability of respondents to express themselves accurately in response to close-ended questions, and the willingness of respondents to answer questions that they otherwise may not be comfortable in answering (Akhter et al. 2008; Silverman 1998).

Most importantly in my research, the qualitative study provides a wealth of information about class and local power relations which cannot be adequately captured in the quantitative data. While I use land holding and per capita non-food expenditure as proxies for class in economic terms, qualitative analysis allows a more nuanced and subtle analysis of the role of class and local power relations in engagement with the PDS.

Qualitative research methods explore issues with respondents on an open-ended basis; collect respondents' perceptions and knowledge; establish the significance of local context; and give voice to respondents' own ideas and views in their own words (Adato et al. 2000). Thus, while the rationale for employing a mixed methods approach to research may vary, at

least five common purposes have been identified (see, Greene, Caracelli, and Graham 1989; Jick 1979).²⁴

They include triangulation (Denzin 1978; Mathison, 1988) i.e. seeking convergence of results by using several types of data to cross-check or cross-validate, compare results and offset any weaknesses in one method by the strength of another. In my research, several findings on factors, needs and preferences regarding PDS are validated through triangulation. As an example, as part of the governance of PDS, preferences expressed over affirmative action are validated through qualitative research with deeper probing.

Further, complementarities (Greene & McClintock 1985; Greene 1987) determine the use of mixed methods where there is benefit from examining overlapping and different facets of a phenomenon by using several approaches and tools. Combining qualitative and quantitative methods helps in discovering paradoxes, identifying contradictions, or obtaining fresh perspectives that relate to the topic of investigation (Haase and Myers 1988; House, 1994; Rossman and Wilson 1995; Datta 1997; Morgan 1998; Amaratunga et al. 2002). This facet of the mixed methods helps in understanding for instance the role of kinship affecting the functioning of PDS in my thesis.

Using quantitative and qualitative methods sequentially implies that the results from the first method inform the use of the second method; as the methods are sequentially employed, it helps mutually in implementation of each method. Qualitative study helped in design of the questionnaire by choice of controls or options to choose from, for example what should be the granularity at which social identity could be defined that is relevant for analysis. In identifying caste affiliation, qualitative study showed that broad categories as upper, backward and lowest caste might be inadequate as individuals identified with the sub caste within each caste group, a factor i.e. identified well in qualitative surveys.

Mixed methods also facilitate the conveying of findings and recommendations to audiences with different capabilities and interests. This feature is important post analysis where the findings and the recommendations flowing from them can reach a wider audience given the

²⁴ The other three common purposes identified include “development, initiation, and expansion” (Greene et al. 1989, pp. 1)

multi-disciplinary nature of the issue related to social safety net programme like the case of PDS. My research builds on these principles all throughout, in combination with the quantitative analysis (section 3.3).

3.2 Methods: nature of data, techniques of collection and processing of data

In this segment, I discuss the kind of data and the techniques of collection and processing. My research was conducted in two phases. In the first leg of my research, both my quantitative survey and qualitative study were conducted in Bihar. Surveys and in-depth interviews were part of my primary data collection. Additionally, from the point of view of analysis, some of the districts from Bihar, are VDSA districts of ICRISAT.

VDSA is a long term, high frequency, panel data. The data collects on sources of food consumption including from the PDS. The VDSA also collects extensive information on household characteristics which can help in analysing the association of the PDS functioning in terms of uptake of grains, its shares in consumption portfolio, prices paid, utilization and whether these are sensitive to household needs. Most importantly it provides data on reliability of programmes like PDS from the point of view of rights-holders. For my thesis the data was a good comparator. From the point of view of analysis, some of the districts from Bihar for my thesis are VDSA districts. It was pertinent to examine how these villages fared in relation to their experience with PDS with findings from my own data set.²⁵

Treating the two kinds of surveys (quantitative and qualitative) as complementary, my study was conducted in two phases. The methodological approach was phased as follows:

²⁵ The Survey conducted by the National Sample Survey Organization (NSSO), of the government of India (GoI) is also a valuable data set to work on. Each survey contains detailed information on values and quantities of household consumption along with other household specific information. The questionnaires used by the NSSO for data collection distinguishes consumption from the PDS and from other sources but only for cereals. It is therefore possible to estimate the price paid at the PDS and at the open market if both sources have been used by the households. Thus, it allows estimating the share of PDS in consumption expenditure and calorie intake of each household. However, the rationale for using VDSA data and not NSSO is that it does not give the full portfolio of consumption by source and is available only at a gap of five years. Also, the last round available is only in 2012.

Phase 1: For my PhD research I collaborated with IFPRI's TARINA (Technical Assistance and Research for Indian Nutrition and Agriculture) project to roll out my survey. Here, my earlier employment with IFPRI, the good will, and the work track record enabled me to engage with them to make my work part of their research project. Hence it turned out to be an effective collaboration. While the IFPRI-TARINA team were engaged in the agriculture and nutrition link side of the programme in the PDS, I oriented them towards the need to understand the demand side of the social safety net programme. In effect I augmented their research to include questions on demand side of the rights holders. My quantitative survey module (of assessing the needs and preferences of the rights-holders) formed part of the module of a survey (which seeks to investigate the effectiveness of PDS in Bihar) rolled out by IFPRI in the five districts of Bihar- Banka, Patna and Darbhanga, Munger and West Champaran. The data was made available to me for my PhD thesis and all publication needs. As per the agreement, IFPRI will not use that module for publications till my PhD is done.

The roll out of survey took place in different phases: preparation of the questionnaire, training and pretesting and the final roll out of the survey. Though I took the lead in the preparation of the survey questionnaire, I did seek inputs from both my supervisors and the IFPRI team. Following the finalization of the survey modules, we (including IFPRI team and research coordinators) pretested the questionnaires in one of my research site (Bihar). After incorporating the changes post the pretesting, we prepared the field enumerators with a week's training on the questionnaire. I accompanied the enumerators to few research sites for the roll out of the survey, post which the data collection was monitored from IFPRI Delhi office. Since the data collection was digital based (using tablets), and the validation of the data was being done in real time, the data integrity was maintained.

My qualitative study comprised three components of semi-structured interviews, focus group discussion and non-observant participation method. I followed a qualitative research methodology to understand in depth what people think and how they feel about their needs and preferences in relation to the PDS and how it can better serve them. This part of the research involving qualitative methods was conducted as an in-depth analysis of the match or lack of it between provisions of the PDS and what is preferred by the community and/or needed by it? I made extensive field notes as well as audio recordings. In cases where interviews were recorded, I transcribed them as quickly as possible and was stored in text form.

Phase 2: In the second phase of my research, IFPRI rolled out additional surveys in the two states of Odisha and Uttar Pradesh (eastern UP). The region of Eastern UP is neighboring to Bihar and is a pertinent case for gauging the difference where food habits and cultural contexts are very similar but there is likely difference based on governance. Odisha is predominantly a tribal region and it provides a different setting comprising vulnerable population in remote areas and with different food culture and norms.

3.2.1 Data collection tools: Qualitative methodology and field experience

I focused my qualitative work across three villages in one district of Bihar. The length of my field work lasted for 10 months. The choice of Patna district within Bihar was finalized for my qualitative work because Patna is the most populous district in the state with significant population heterogeneity (inter alia more migrants). Within Patna district I chose two blocks, two heterogeneous villages in terms of caste composition from one block and one village with a comparatively homogenous caste profile from another block. The qualitative data was collected through interviews, Focus Group Discussions (FGDs) and observations aimed at understanding the needs and preferences of the community in relation to the broad themes of commodity choice, delivery mechanism, and targeting systems in principle and in practice. It also included understanding community's perceptions, their choices and understanding of issues in food-based safety net programmes and how the PDS might better meet their needs and preferences

The interview questionnaire had key questions grouped thematically (with additional related questions to be used as prompts) and focused on “gaining insights and understanding” (Gillhaam 2000; Ritchie and Lewis 2003) which heavily depends on the communication skills of the interviewer (Clough and Nutbrown 2007). I conducted interviews with PDS rights-holders, village level functionaries (Village *sarpanch*-head); *Gram Panchayat* members (village council members), block level and state level functionaries. In conducting interviews, I would start with the most mundane and simple questions (for example “Do you have a ration card”? “Do you go to collect the ration”?) and then take the level of conversation to higher domains with deeper questions probing more intricate issues. I intervened only when I had to ask some probing or clarification questions. The selection of

respondents was purposively made to cover all social groups (primarily those who had the ration card). To widen my network, I also used the snowballing' technique (where in I asked each interviewee to suggest other people that I could talk to).

The interview guidelines for *gram panchayat* representatives, block and state government officials were more specially focused on getting an overall picture of the functioning of the PDS, issues associated with it, the implementation challenges etc. Around 115 semi structured interviews (village, block and state levels), were conducted in the first **phase** of my data collection in Patna district.

In the second phase, in the state of Odisha two districts and four blocks, four villages across these blocks were selected purposively. Both the districts of Kalahandi and Kandhamal are placed among the least developed districts of Odisha with low healthcare and livelihood access and wide-spread rural poverty with majority of the population belonging to the tribal community (census of India 2011) (section 3.7). A total of 60 respondents were interviewed from four selected villages, in addition, *gram panchayat* representatives and block official were interviewed as well. In Eastern UP only one district, and within the district two blocks, one village each from these two blocks were selected. Around 30 rights-holders interviews were conducted, including the *gram panchayat* representatives, dealers and block officials.

Focus Group Discussions (FGDs) were conducted at the village level of both men and women rights-holders separately, of village council members and PDS dealers. A total of 16 FGDs across three villages in Bihar; 8 in four villages of Odisha and 4 in two villages of Uttar Pradesh were conducted. The emphasis of the FGDs were to triangulate the personal interview data and learn more about the local power dynamics and the informal systems related to the workings of the PDS.

In addition, I adopted the non-participant observation method in observing some of the block level meetings, and the disbursement of various cards to the rights-holders at the block level in Bihar. It gave me an opportunity to observe some of the informal practices and power dynamics between the local people and the government officials. In Bihar I also visited the state Food Corporation of India (FCI) storage site to physically inspect the Food grain

stocking, the quality control measures they adopt.²⁶ In addition, I also had the opportunity to observe one of the biggest gathering of the FPS dealers in Bihar. More than 80 dealers had gathered in the Bikram block of Patna district to discuss issues around PDS. Being part of these meetings was extremely useful in obtaining insights into the functioning of the PDS.

3.2.2 Positioning as an investigator, reflections and assimilation for data integrity

Prior to my PhD, I have been a development practitioner and a research coordinator for over 14 years, focusing largely on the issues of nutrition and public health. My last employment was with the International Food Policy Research Institute (IFPRI), and I was working with a large-scale multi-state and multi-stakeholder project focused on nutrition. I have worked in several international organizations over the last decade, prior to which I was a journalist with a leading financial daily and a general interest newspaper in India. Apart from facilitation and execution of policy research, I have experience in advocacy, strategic health communications and knowledge and partnership management in areas of health and nutrition in India.

In the course of my professional career in a different capacity, I have had the opportunity to develop research skills needed for field data collection. I have had experience working in remote tribal areas in difficult terrains. I have produced several papers and reports, some are published, and some are under review. I view myself as an applied researcher and have tried to be a purist in empirical work. Though not trained as a statistician or economist, yet I have always striven to execute empirical work as a purist. I have learnt new methods during the course of my PhD.

Besides dealing with qualitative data which has been my forte, during my PhD, I honed up my quantitative data skills that involved different elements such as preparing the survey questionnaire, the roll out of the survey, getting the data in a ready to use form, identification issues, use of software such as Stata involving questionnaire programming and validation

²⁶ Storage plan of FCI is primarily to meet the storage requirement for holding stocks to meet the requirements of Public Distribution System and Other Welfare Schemes undertaken by the Government of India. Also, buffer stock is to be maintained for ensuring food security of the nation. Adequate scientific storage is pre-requisite to fulfill the policy objectives assigned to the Food Corporation of India for which FCI has a network of strategically located storage depots including silos all over India.

checks. Using mixed methods, my work could be categorised as multidisciplinary. My work brings in elements from economics, development and gender studies, psychology and elements suitable for food policy programming.

Born and brought up as an Indian girl from a mid-size city in eastern India in the state of Odisha with small town ethos and with many prior years of research experience in working in India, I was sensitive to our cultural norms, gender issues, and social identity amid wide inter-state variations. Yet, it had not prepared me for the repertoire of raw and rich experiences. At my field site, my being Indian from a backward state, one that was part of the field work did nothing to dispel the image that I belonged to a privileged section of the society, the urban-rural divide stayed firm as a barrier (Rosen 1998).

As a researcher, I was faced with this dilemma of being both an outsider as well as an insider (Clifford and Marcus, 1986; Smith 1993; Alcoff 1995). Therefore, I had to do a tight rope walking to keep my focus intact. I was constantly aware that while I knew certain things given my Indian ethos, there were many aspects I did not have the understanding about. Through my conduct of the research, I did my best to demonstrate my willingness to learn from those I came to observe and study and soon a symbiotic relationship sprung.

Before initiating my research, I did make several field visits to the villages to familiarize myself with the villagers, the local customs, traditions and their lives, including pretesting my survey questionnaire. Though I was supported by IFPRI field researchers in gaining access to the households for conducting interviews, I had to lay the basis of trust and an abiding, guileless friendship to ensure that the participants become responsive.

Being a married woman and a mother to a growing girl helped me to establish my position amongst the rural women. Mothers especially opened with discussion veering around kids, husbands and in laws. I was clad in a simple ‘*salwar-kameez*’, the traditional Indian garment, vermilion, bangles and *bindi*- colored dot worn on the center of the forehead (the marker of being married), not only to become one of them but also to be a hands-on field researcher.

I had to rework my preconceptions and take on a new dimension into my personality profile, i.e. “revealing knowledge beyond itself of the social world within which the interview event has occurred” (Banfield, 2004 as cited in Newton 2010, pp.1). From dawn to dusk, I was

part of their household activities, stationed at their village. I interviewed them at their convenience and whether it was in their kitchen while cooking morning meals, or in agriculture fields, or part of their afternoon sessions where they would park themselves on a *charpoy* (a traditional woven bed used in villages) and have friendly banter with their neighbourhood women.

During the interviews I was aware that interview participants may be in an unequal relationship (Madge et al. 1997). At times during the interview I found that a husband would pitch in to make a point or correct his “wife”. There were times when the power hierarchies were quite palpable, and the male patriarchal mind-set seemed to prevail. Inevitably the husbands engaged in some ‘prompting’ and in some cases, had to be requested to allow the women to respond themselves. I tried and changed my timing of interview when generally the men folk were not around to interview women.

Soon, I felt lucky to be let in into their world. I was invited to their weddings, which I enthusiastically took part in, applied mehndi²⁷, savored the delicious local food. Each household I would venture into, offered me whatever food they had at home, however meagre or humble. As a researcher, I would feel guilty of being demanding on their time, food and hospitality. They would go that extra mile to make me comfortable. Since I wanted to be part of their lives, I never refused, but rather explored ways to compensate. I would at times buy sweets, or vegetables or gifts on my way, from the nearby city. It was, the least I could do, for the kindness bestowed upon me, by allowing a perfect stranger into their world which formed part of my research work in field. Village fairs, local *pujas* (Hindu worship or prayers) allured me and taught me the simple joys of community participation. In one of the villages, I volunteered to teach in a local school to express my gratitude in a meaningful way. It was a humbling experience all the way. Research of course has its share of limitations and challenges, but what I had not bargained for was the sheer joy of undergoing a journey that made significant inroads towards my growth as a researcher.

I was aware that my presence would raise expectations of possible interventions, and that people would perceive me as a “messiah” in solving their problems. Hence, at the outset I

²⁷ Designs are created on a person's palms using a paste, created from the powdered dry leaves of the henna plant, generally considered auspicious during wedding ceremony.

made it clear to the participants about the nature of the research and its impact that they might expect. Despite that, in all the villages where I conducted my qualitative study, villagers did perceive me as a complaint register. They would rattle off their grievances about the dealer, the delay in the disbursement of ration for that month among several expressed woes. Some would come up with their ration card to show me how they have been deceived or “cheated”.

In one of the villages, people started viewing me as government official doing a random check on the functioning of the PDS in their villages. This elicited extreme reactions from different quarters. Villagers were relieved that there was somebody to give them a patient hearing regarding their grievances, and offer remedial measures, on the other hand, the local authorities, goons (bullies or thugs), the dealer of the ration shop went into a state of frenzy.

In fact getting access to the dealers and interviewing elites were fraught with difficulties. First, at the village level the dealers and the local elites who had a stake in the PDS felt threatened with my presence. More so since my surveys were primarily done post the roll out of the National Food Security Act (NFSA 2013) in which grievance redressal mechanism and inspection of the PDS shops formed an integral part of the legal framework, my interactions were perceived as threat by some in the beginning. There were a lot of speculation amongst the dealers, and the local elites in terms of how these mechanisms would pan out in the long run. Dealers were thus apprehensive of any visitors to their village, and I was seen as an easily accessible ‘complaint box’ for the villagers, and a conduit for grievance redressal mechanism. With sustained interactions, those fears were allayed.

In a particular village in Bihar, there was a unique set of challenges. While the attributes mentioned above facilitated in providing access to the village and villagers were quite willing and forthcoming to talk, I found that in general there was a hostile environment in terms of being ‘watched’, seen mostly as a ‘government functionary’ on ‘inspection duty’. Despite being accompanied by a local research coordinator from IFPRI, befriending lot of village women, participating in their village rituals, this hostile environment lingered on for a while.

Words spread fast in a village community, and things started to ease out a bit when I was invited by the local Member of Legislative Assembly (MLA) (a woman) to interview her

first, before I ventured to talk with local villagers. Though for the most part of the interview the husband was the one who was interacting with me, I managed to build some rapport with the woman politician which veered around kids, education and local food.

My earlier experience in various professional capacity, field work research skills, the ability to develop interpersonal relationship, and identifiable background compensated for the most of the initial hostility on the part of the interviewee (here the local politician) in starting a conversation that eventually focussed on the problems in the PDS, the issues around ration card and the associated solutions that were then discussed. Interviewing the local politician first, and building a rapport with her, finally cut the ground for me to access the village. Local politicians have a strong hold on their village community, 'seen' talking with her kind of consolidated my position in the village. There was general acceptance hence forth. I was also helped considerably by the local research coordinator from IFPRI in establishing my credentials.

In some of my other research sites, while getting access to the dealers for interviewing was not an issue, getting access to a PDS shop at times was difficult. The days they would agree to show me around the shop including the storage space facilities for grains, it would be a 'stage-managed' meeting (with well-maintained storage space, good quality grains, weighing machine, and perfect record keeping register), contrary to what the rights-holders would have stated in their interviews. In such a scenario, when it would be evident that it has been stage-managed, I would in such circumstances make surprise visits that left little time for the dealers to change the settings of the shop.

Invariably I found bad quality grains, and shabby storage space. They would then try to talk me through, start making excuses around supply side issues. Post these incidents I used to often get phone calls from block level higher officials to not interfere in the working of the PDS. In addition, some of these dealers would be apathetic to the whole episode. Being a researcher, my hands too were tied down.

Staying longer in my research site, making friends with the informal social networks, also got me access to one of the 'closed-door' meetings of the dealers in the region. My earlier career as a journalist equipped me with the skills to talk through the process to get access to this meeting. I was the only one privy to their discussion on what strategies they apply for

the prices to be charged for the food grains which is highly subsidised by the government, their problems with the government officials, among others. I also had a chance to speak with some of the dealers present in the meeting in trying to understand their perspective since they are the last mile in the whole PDS chain, and the successful implementation of the system depends heavily on them.

However, there were few funny moments too, when there were attempts to bribe me in kind so that I would do a “good” report, when I would head back to Delhi (the city I hailed from, also the capital of India). Interviewing men in positions of authority (like the village *sarpanch*, or village council members) was also challenging. Being “*shaadi-shuda Mahila*” (married woman), with a “doctor” as a husband, compensated for some of the gender asymmetries. The villagers were kind and generous. Within their limited means during my visit, as part of welcome, the spread of dishes served in my honor was both overwhelming and embarrassing at times. But the people in villages are inherently more generous and affable hosts than those in towns or cities.

In conducting interviews with government officials at the block, district and state levels had its own share of challenges. The first was the scheduling of the interviews, and the constant cancellation of the interviews because of some “urgent” meetings that the official would have to attend to. Despite having access to the official, the second constraint was the limited time allotted for the interview.

Depending on the level of the position in the department, the time allotted for the interview would invariably vary. Higher the official, lesser the time allotted. I would typically customize my questionnaire accordingly, though starting with the usual conversation around his/her role in the PDS, I would steer the conversation to specific questions that I needed to ask relating to the issues that emerged from the field data collection. In addition, during these interviews, some of the higher-level officials would either be distracted with their phone ringing or their personal assistants barging in to sign some official documents. While it was disruptive, but since in all the official interviews I was not allowed to tape-record the interviews, I would invariably use that time to write down my observational notes.

Not being allowed to tape-record the interviews too had its share of challenges. One, I had to write down ad-verbatim the whole conversation while maintaining eye contact, and

constantly engaging with interviewee. There were cases too where I was asked not to even take notes. In such a scenario I would listen to the conversation very intently and make mental notes. I would then make extensive notes post the interview. There were also instances where the official would try to take control of the interview and steer the conversation about himself and how greatly he was doing in his work, alluding to others as corrupt officials. It took tact, some bit of massaging their ‘ego’, and politely bringing them back on track on issue-based discussion.

3.2.3 Qualitative: data analysis

Qualitative data analysis for my research project has been an iterative process right from the start, conducted at different levels. I took extensive notes in my field diary of my interviews (semi structured and focused group), my observations/reflections and interpretations of it during my field work. Besides, my recorded interviews were translated and transcribed. I made summaries of all the interviews and FGDs, following which I theme-coded the interview responses manually on an excel sheet which was based on the key issues of the interview guidelines. This process was useful in providing insights during the data synthesis.

3.3 Data collection tools: Quantitative methods

3.3.1 Details about primary data collection

The survey collected detailed data on different facets of the households in terms of their characteristics, their consumption patterns and their existing engagement with the PDS as well as prospectively. Specifically, for analysis, the survey provides information on the purchases of rice and wheat and issues of access to PDS. The data collected is stratified based on caste, gender and location.

Given the enactment of NFSA, my survey collected data not only on several household characteristics but also on whether the household belongs to BPL family or AAY family, and the social group of the respondent. A module in the survey also gathered information about the functioning of the existing PDS such as how many months they get ration from PDS. Another segment collected information on the preferences for the cash transfer, food coupon, pulses, and ranking among cash transfer, food coupon and existing PDS.

In terms of methods, the scant literature in needs assessment has been largely qualitative and descriptive. Studies have not used methods that address basic empirical problems of inadequate measurement of the determinants such as how to measure power relations and the issues related to potential bias in estimation (Khera 2011). In my thesis using quantitative methods I implement a comprehensive and systematic approach based on the conceptual framework in Chapter 2 to assess the influence of contextual factors in relation to valuation and utilization of the PDS by location and population groups.

A major limitation of quantitative methods to study food-based social safety nets like the PDS is the non-availability of information on broad-based dimensions ranging from consumption to issues relating to access and governance. Accordingly, a primary survey was crucial to address the objectives of my thesis.

The surveys were conducted in different months beginning February 2016. The surveys were done at a time that is after the legislation of National Food Security Act-2013 that provided an ideal opportunity to analyze issues regarding the PDS which the last node in delivery in the implementation of the act is. Also, there have been claims about reviving PDS in the survey states, it was thus appropriate and opportune to study the case of PDS from the point of view of needs and preferences. The primary data collection involved cross-sectional designs – in selected communities in rural Bihar, Odisha and poorer parts of Eastern Uttar Pradesh. The combined sample size of 1600 households spread across three states is atypically large for the surveys on this topic.

The actual sample size was drawn up once the study scope and objectives were finalized and using the key indicators. Inter alia I applied due stratification and typologies such as female headed households, caste affiliations, occupational differences and migrant households. To identify the households, a brief screening survey was carried out to identify household strata: such as possession of BPL/AAY cards. The details of each module in the questionnaire employed in the survey is discussed next.

3.4 Structure of quantitative data collection: Methods of sampling and nature of information collected

In case of quantitative data, I relied on stratified random sampling after the selection of the districts. In the districts, at first the villages and then the households in those villages comprise a randomly drawn sample from three states. Given the lack of longitudinal data that constrained accounting for household level factors, I collected extensive data on household, individuals and communities to minimize the sources of bias to the best extent possible when using merely cross-sectional variation. The quantitative survey data contained detailed information on households and it contained the following modules (Annex 4):

(i) The Identity module

The identity module comprised information on location i.e. village, blocks, districts, location variables that relate to extant spatial heterogeneity. The location of fair price shops and number of shops in the vicinity are also part of information. Specifically, the identity module also collected information on the social identity of households, their religion and castes, and respondent relationship to head of the household capturing facts such as whether the household is female headed and characterized by male migration particularly driven by distress.

The identity module also contains information on income and assets to capture the economic status. It looks at the level of assets in terms of both binary indicators whether landholding or landless, and occupancy status of the most important asset in villages i.e. land. I also collected information on the own supply of grains (both rice and wheat) in terms of the production if holding land.

Since household size and composition has a direct link with the demand for food, the module also collected that information. In addition, I also collected information on the classification of the households from the point of view of entitlements i.e. whether the households were a below the poverty line household or were identified as poorest of the poor. As eligibility was often compromised based on local power relations, I kept queries on the de facto status of

the households in terms of eligibility and not necessarily the one in principle i.e. notwithstanding their actual economic status.

Along with the standard demographic variables related to age and gender, I also focused on getting as complete an information as possible on education and literacy of the household head and the women in the household who turned out to be the member accessing the PDS.

(ii) *Module on access and perceptions about accessing the PDS*

To characterize the access to the PDS and the experiences in accessing the PDS, the survey collected detailed information on experience with the existing PDS starting from the costs (monetary or other, if any) in getting eligibility and identification. The experiences in accessing the PDS and the quality of access reflected in the perceptions and the choices in the prospective PDS.

As foundation to the needs and preferences related to the PDS, the survey collected extensive information on the subjective beliefs perceptions i.e. if the households felt that they get ration quantities and prices fixed by the government, are treated properly by the Fair Price Shop owner, the experience on timeliness in delivery. In the same module, given the institutional provision for grievance redressal that in principle could remedy the problems facing the rights-holders in the PDS, the survey also contained detailed information on grievance redressal mechanisms and its utilization.

(iii) *Module expressing revealed preferences related to the PDS*

Information on revealed preferences for the PDS in terms of its attributes: product portfolio; delivery mechanisms; selection mechanism and governance redressal systems, were collected alongside elements of PDS such as whether, the preference was for PDS allocation to be based on per individual or per household? Similarly, I collected information on whether the choice was for equal allocation each month or differential allocation based on the time of the year. In terms of delivery mechanisms, the survey assessed the preference for cash transfer over the current system of in-kind food subsidy. In case of preference particularly for delivery mechanism, it was measured in terms of a rank ordering on a Likert scale.

(iv) *Module capturing experiences in PDS service delivery*

Apart from quantitative markers of access viz. the quantities of grains that accrue or the prices paid, there is a big element of service delivery. Binary and ordered responses were collected on questions related to whether caste or gender-based discrimination in PDS was experienced or observed. With the prior that discrimination was more likely if the caste of the dealer was different, questions in the module collected the binary information on homophily i.e. whether the caste of the dealer and the beneficiary were the same. In terms of methods I had to take care of the granularity at which the sameness in caste was realized. The subjective importance of homophily in determining outcomes, I captured on a Likert scale that ranged from 1. Very important (2) Important (3) somewhat important (4) unimportant (5) irrelevant. Similar ordered rankings were obtained on the importance of FPS manager being a woman.

3.5 Sample composition

Table 3 presents the sample composition of Bihar, Odisha and Uttar Pradesh in terms of socio-economic characteristics. I present these statistics to support the various elements of heterogeneity based on data collected. There are five main social groups in the field site:

- (i) Scheduled Caste (SC),
- (ii) Scheduled Tribes (ST),
- (iii) Other Backward Classes (OBC),
- (iv) Minorities and
- (v) Upper/General Caste.

These are administrative categories; social identity on the ground is defined more at the sub caste or clan level. In Bihar OBCs at 55 percent form the majority and included groups such as the *Yadavs* and *Mauryas*. They were followed by the SCs (*Chamars, Mochi, Dhobi, Dusadh*) at 20 percent, STs at 12 percent and general or upper castes (including the land-owning *Bhumihars, Rajputs, Brahmins*) forming 11 percent.²⁸ SC/STs include castes and

²⁸ The caste system in India is divided into four main categories-*Brahmins/Bhumihars (upper caste), Kshatriyas and Vaishyas (Other backward classes), followed by Shudras (lowest in the hierarchy-SCs and STs)*. The main castes have been further divided into about 3,000 castes and 25,000 sub-castes, each based on their specific occupation. Traditionally, the system bestowed many privileges on the upper castes while

tribes that have historically suffered economic and social discrimination²⁹. Given their social status and leverage in determining outcomes, throughout my research project, particularly in Bihar, I focus mainly on the relationship between the *Bhumihars*, *Yadavs* and SCs caste identities interspersed with other attributes such as gender.

Table 3: Sample Composition-Sites –Bihar/Odisha/Uttar Pradesh- Primary Data

	Bihar	Odisha	Uttar Pradesh (Eastern)	Combined
Sample Size	962	338	194	1494
Age of the respondent	48.26	51.96	46.63	48.88
Household size	6.12	4.44	5.93	5.74
Female (%)	29.52	25.44	29.9	28.57
Female Headed Households (%)	35.34	17.16	26.29	30.05
Percentage of respondent belonging to				
Scheduled caste	19.85	25.74	8.25	19.68
Scheduled tribe	12.16	61.24	0	21.69
Other Backward caste	55.41	10.36	87.63	49.4
Minorities	1.87	2.37	2.58	2.07
Upper caste/upper caste	10.71	0.3	1.55	7.16
Percentage of respondents with				
No School	53.06	55.38	34.15	49.14
Primary School	17.72	22.58	36.92	22.62
Middle School	12.97	10.75	7.38	11.45
High School	10.13	6.99	20.13	11.99
Intermediate	3.16	2.69	0.92	2.6
Bachelors and above	2.96	1.61	0.31	2.2
Percentage of respondents who				
Have migrants (%)	27.01	5.65	20.21	21.31
BPL Card holder (%)	47.3	1.48	32.99	35.07
AAY Card holder (%)	14.66	10.65	17.01	14.06
NFS Card holder (PHH) %	35.24	86.98	1.55	42.57
Ration Card Holder (%)	98.69	99.5	51.47	98.58

sanctioning repression of the lower castes by privileged groups. In India though discrimination on the basis of caste is banned, in order to undo some of the historical injustices and provide a level playing field to the traditionally disadvantaged, quotas in government jobs and educational institution were introduced for the SC/STs, the lowest in the caste hierarchy. Subsequently it was extended to the group called the Other Backward classes (OBCs) that form the intermediary group between the upper and the lowest castes. In Bihar, OBCs (eg. Sub castes like *Yadavs*, *Mauriyas*) are the ones who have dominated the social, economic and political space in the state in recent times. The schedules castes or *dalits* (ex-untouchables) comprise of the sub-castes like the *Chamars*, *Dusadhs Dhobi*, *Bhuia* etc, and stand at the bottom of the socio-economic strata. They are the most disadvantaged group, followed by the STs.

²⁹ Article 46 of the 1950 Constitution pronounces “The State shall promote with special care the educational and economic interests of the weaker sections of the people, and, in particular, of the Scheduled Castes and the Scheduled Tribes, and shall protect them from social injustice and all forms of exploitation.”

FPS availability in their village (%)	72.74	1.48	16.32	49.36
Aadhar Card holder (%)	74.69	95.86	95.34	82.16
Bank Account (%)	78.88	96.75	96.89	85.25
Landless	34.93	32.84	12.89	39.56

Note: Aadhar is a 12-digit unique identification number issued by the Indian government to every resident of India

Family size and structure has a direct relationship with food entitlements as household allocations (for households other than the poorest of the poor (AAY)) are defined in per capita terms. The average family size therefore shapes the entitlement as well as engagement with the PDS. Extensive male migration in Bihar has led to almost 35 percent households becoming de facto female-headed (FHHs) and these households face different conditions (covert forms of discrimination) when accessing PDS. Further, if the whole family migrates seasonally, they lose legal access to PDS as the entitlement is linked to the location.

Within the sample, there are significant differences based on caste, gender, economic standing and political connectedness. Land is an important source of economic and political power for rural households. In Bihar nearly, 52 percent of households' primary source of income is wage labor. This heterogeneity is important where landlessness or small landholdings result in a greater stake in the PDS. In this context, the inheritance laws that de facto restrict land ownership for women deny them an important source of local power, reflected in lower levels of access, and indeed bargaining power.

In the sample, for the state of Odisha the largest percentage comprises STs, around 61 percent, with comparatively low percentage of SC at 26 percent, followed by OBC which is around 10 percent. Average family size is around five members/household in Odisha, and only about 6 percent in Odisha reported migration in the last one year. The FHHs comprises around 17 percent hence much lower than a state like Bihar or Eastern UP. In Eastern Uttar Pradesh, majority of the respondents comprised OBC around 88 percent, followed by SC at 8 percent. The minorities constitute only about 2 percent of the sample.

Based on these markers, in subsequent chapters, I analyze the issues around access, the variations observed across three states and across households, and the heterogeneity that they reflect in their choice from the PDS.

3.5.1 Sample composition: further disaggregation

In the sample, the gender disaggregated social group composition shows that female OBC dominated in Bihar at 60 percent, similarly in the (Eastern) Uttar Pradesh nearly 88 percent of female respondents were OBC, whereas in Odisha, quite predictably, the percentage of female respondents belonging to ST was the highest at 52 percent. For all states combined, in both the category of men and women, a significant percentage belongs to OBC, followed by ST and then SC (Figure2 and 3)

Fig 2: Percentage of FHH based on social group

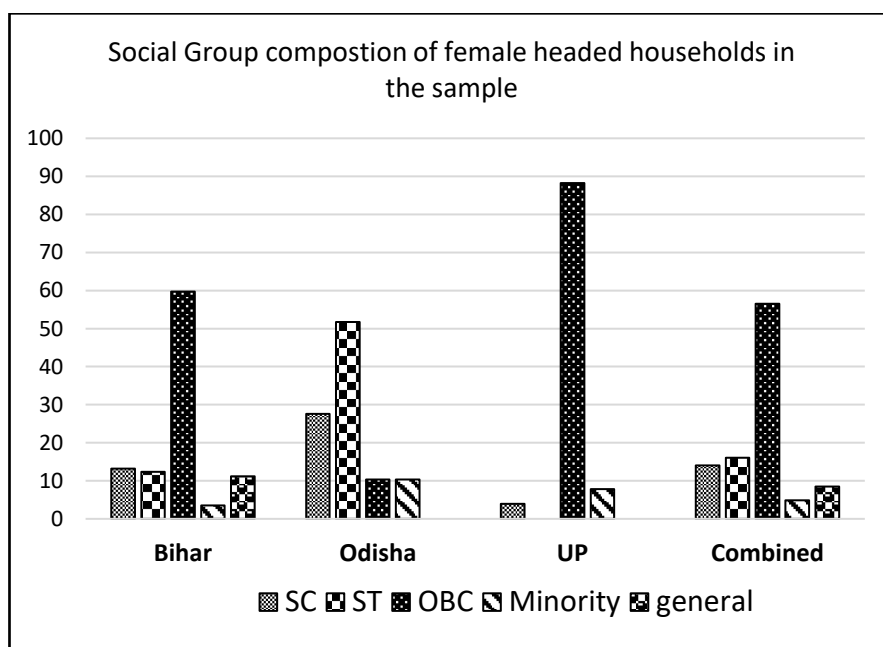
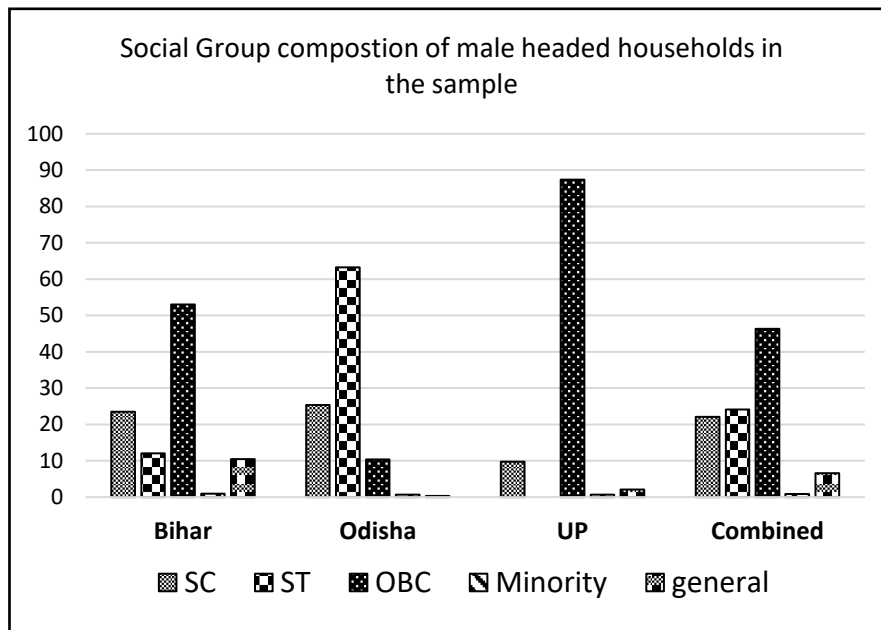


Fig 3: Percentage of MHH based on social group



3.6 Quantitative data analysis

The main purpose of collecting primary quantitative data through experiences with the PDS and the changes desired in the system is two-fold: (i) First to compute and assess, through a richer set of indicators and measures, the dimensions of food and nutrition security in a setting with livelihood risks and commonly low purchasing power and (ii) secondly, to analyze, based on observable explanatory factors why certain households are more vulnerable to suffer adverse outcomes. A third important aspect of my analytical strategy is to identify the dynamic pathways – denoting the coping strategies and efforts to smooth consumption against household-level food shortfalls or aggregate shocks such as adverse weather conditions. I focus on strategies adopted by households, in their effort to ensure or maintain thresholds of food and nutrition security. My combination of analytical approaches could lead to answering important policy questions, particularly regarding delivery and use of PDS.

Using quantitative data obtained through random sampling and use of relevant econometric methods that control for location specific unobserved factors, discrete and ordered responses as well as issues of sample selection. I try to address potential biases because of confounding

factors as the core of the quantitative analysis. I obtain results that are then validated through qualitative methods (section 3.2.3). I employ quantitative methods to address principally two types of research questions:

- (i) Determinants of the access to the PDS including the quality of services rendered
- (ii) The association with revealed preferences for different attributes related to the PDS.

Given the vulnerability of the different groups from different socio-economic strata, the analysis first tries to assess how the PDS is possibly contributing towards reducing food insecurity risks. Combining rich data on livelihoods, production and issues such as migration with household survey data I look at different dimensions of food insecurity like availability of food-based on preferences and access to and utilization of PDS as a food-based social safety nets. The quantitative research aims to provide insights into identifying the gradient of food insecurity with varying levels of food access based on characteristics and measures of access, and how PDS can be leveraged to mitigate risks for the vulnerable and improve food security outcomes. I assess the role of typical socio-cultural attributes like caste and status of women and resource endowments, such as portfolio of livelihood strategies and characteristics such as education, assets and socio-economic factors as well as attributes of public services (availability, affordability and quality dimensions).

What alternative ‘pro-active’ delivery mechanisms in the PDS and innovations can be integrated with existing delivery systems, which can potentially ensure food security, improve access and reduce vulnerability while meeting the quality standards in services? To address this question the quantitative data employs approaches to capture revealed preferences to explore choices through which the public service delivery systems can be reformed, in view of the demand-side factors and attributes of existing delivery mechanisms.

I analyze based on indicators such as (i) price realization (ii) quantity accrued (iii) quality of grains provided and finally the quality of services rendered to the beneficiary. I examine the effects of contextual determinants of access to the PDS comprising the role of social, economic, political, structural and policy driven factors (individual, household and community level).

Apart from the exogenously given characteristics such as social identity that are important in determining access and other experiences with the PDS, I also look at policies such as grievance redressal mechanisms, selection criteria and delivery mechanisms within PDS and their implementation as determinants of the needs and preferences about the PDS. The methods employed using cross-sectional data comprise multivariate models containing individual-level, household level and community level variables.

Apart from using a comprehensive range of contextual variables from the questionnaire, I also construct some new contextual variables. These relate to amount of grains received by households relative to the mandated, prices paid relative to the level set in law. In assessing measures of access, I emphasize the quality of access in terms of grain type, quality as well the time costs as well as other subjectively assessed costs due to rude behavior of the agents. I take special care in getting the contextual variables by distinct categories viz. gender, caste, class and levels of economic and political power.

Apart from the assessment of association with socio-economic characteristics, I also use the empirical analysis to assess the effects of public policy (inter alia affirmative action policies) and local power relations. With the prior of heterogeneity, the analysis internalizes the effects of the location specific observed and unobserved heterogeneity such as local level characteristics and I consistently add relevant controls such as location fixed effects (village or block) in the analysis to account for site specific unobserved heterogeneity.

The lack of preference for a certain delivery system was assessed in terms of multiple choices possible. With rank ordering as responses, I use ordered models to assess the role of covariates on preferences. I employ ordered probit models and assess the marginal effects of the covariates in moving from one level of response to the other level. Hence, I capture preferences as outcomes in two ways: (i) Unordered and (ii) Ordered.

As the outcomes were measured in different ways, I employed ordered as well as unordered models, models dealing with outcomes measured on a continuous scale as well as discrete categorical variables. In case of binary choice as outcome, I use the probit model. When different outcomes i.e. preferences are assessed together I use a systems approach employing multivariate probit framework. What I observe in the data are revealed preferences but underlying the expressed choices is the optimization that results in one choice over another.

The binary choice that are coded 1 (for preferred) and 0 (not preferred) are based on a random utility framework.

3.7 Context: assessing the degree of heterogeneity across three different states

In this section, first I set out the context, and since in the last chapter, I argued that the primary driver of needs assessment is heterogeneity, I also assess the degree of heterogeneity based on socio-economic characteristics and other parameters drawing from both primary as well as secondary sources. The statistics that I provide here also provides a basis for site selection for this research.

In outlining the context, first I look at the data and evidence on the relevant characteristics mainly related to the socio-economic profile of the households reflected in aggregate statistics at the state/region level from different sources and discuss the relevance to my research project. I also look at the changes in these profiles over time. This discussion highlights the relevant geographical features of the states (Bihar, Odisha and Uttar Pradesh (eastern part)), and then discusses the trends in key areas of the economy.

3.7.1 Bihar state context

Bihar (in eastern India), is one of the poorest, and most densely populated states in India. Outside of island nations, Bihar has higher population density than any other country in the world. As per the census of India 2011, Bihar had a population of 104 million (8.6 percent of India's total), it is the largest state after Uttar Pradesh and Maharashtra (in terms of population). The population density in Bihar is over 1000 persons per square kilometer.

Bihar is predominantly a rural state and has one of the lowest levels of urbanization, 11.3 percent (about one-third of India's average). Among the three-poor region/states that I study, one in six poor Indians lives in Bihar. In 2011-12, as per the National Sample Survey Organization (NSSO) estimate, 33.7 percent of the rural population live below the poverty line at the state-wide level. And the per capita net state domestic product (NSDP) of Bihar in 2013-14 was only 42 percent of the Indian average. Poverty and malnutrition rates have

remained persistently high. Because of its topographic and climatic conditions, Bihar is also vulnerable to natural disasters - both droughts and floods (Kishore et al 2014, Joshi 2014). Within Bihar I highlight the spatial heterogeneity across districts (Table 4). While the capital city of Patna i.e. one of the surveyed districts had an urbanization rate as high as 44 percent, in a backward district like Banka, the rate of urbanization is less than 4 percent. Similarly, in literacy, the richest district of Patna has a literacy rate, nearly 15 percentage points higher than the lowest literacy district in the sample, West Champaran.

Table 4: District-wise basic information

	Population Density (Sq. Km)	Urban Population	Rural Population	Literacy	Sex Ratio
Patna	1800	43.7	56.3	73.68	897
Darbhanga	1700	8.7	91.3	58.26	910
Banka	670	3.51	96.49	60.12	907
Munger	960	16.59	83.41	73.3	879
West Champaran	750	10.09	89.91	58.06	906

Source: NSSO data (2011)

The average size of landholding ranges from 0.31 hectare in Darbhanga to 0.45 hectare in Banka. In Bihar, landlessness is very unevenly distributed by caste, highest among the SCs (92 percent among *Musahars*), lowest among *Bhumihars* (5 percent) and middle castes—*Kurmis, Yadavs and Koeris* (7 percent–14 percent). Upper caste Muslims show 24 percent landlessness, lower caste Muslims 60 percent (Sharma and Rodgers 2015). The agricultural labor is dominated by Scheduled Castes (SCs) and Other Backward Classes (OBCs), while more than 60 percent of the big peasants and landlords come from upper castes, “reflecting a historical process in which caste has played an important role in supporting the class structure because it has legitimized inequality” (ibid, pp. 45; Prasad 1979, 1987; Sharma 2005; Sharma et al. 2011; Das 1996).

Though agriculture and livestock-rearing constitute the main economic activity in the region, many households seek employment in the non-farm sector too. The social structure in Bihar is highly patriarchal and male-dominated as revealed by the low sex ratios. Apart from the differences in socio-economic characteristics, Bihar also offers significant variation in the functioning of the PDS and contrasting experiences across districts, and villages.

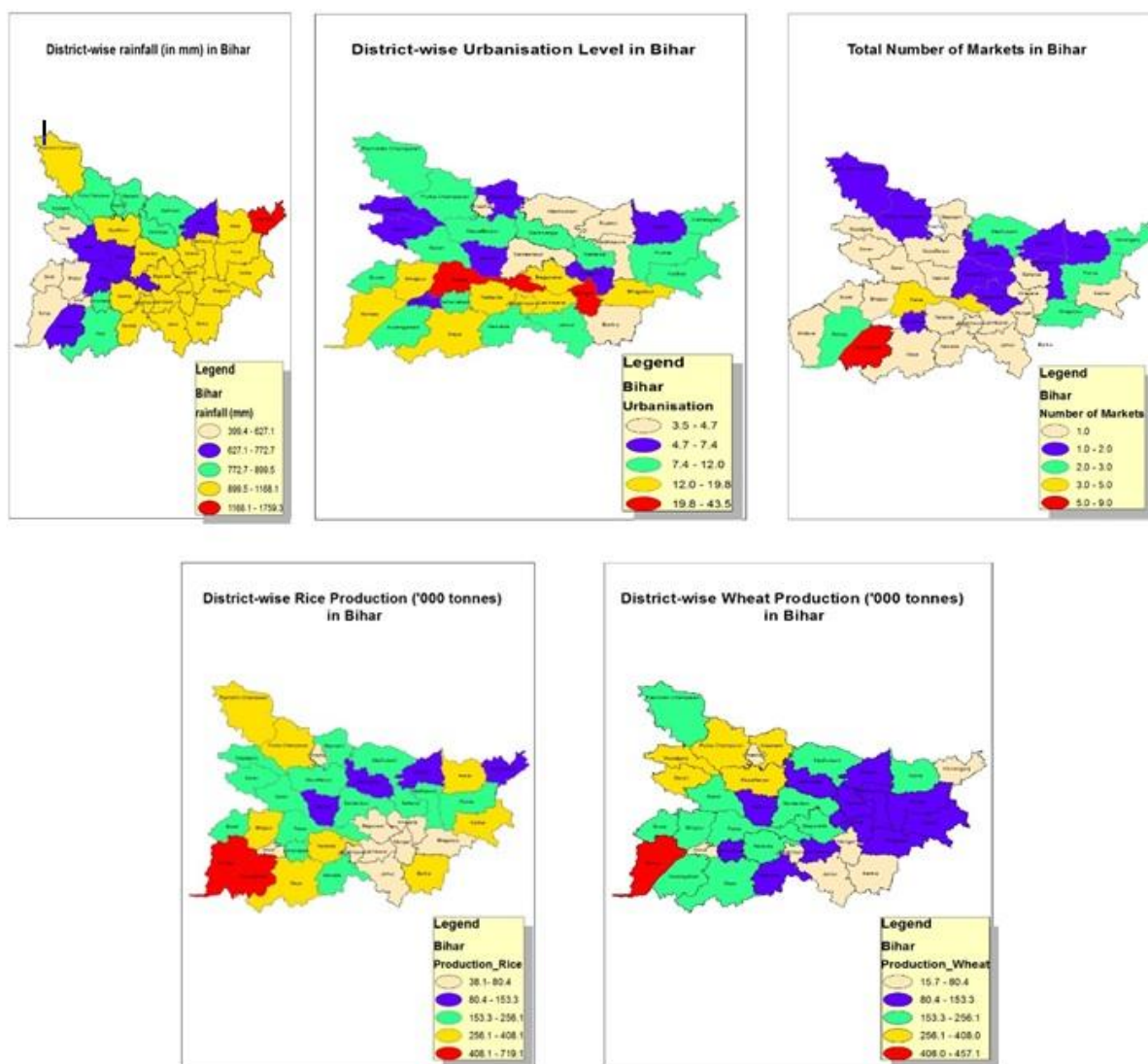
Since the focus of the research is on food-based safety net programme, one important place to look for information and gauge the levels of heterogeneity is the food security Atlas of rural India (Bihar-2009) prepared by M S Swaminathan Research Foundation (MSSRF) and United Nations World Food Programme (WFP), which includes several indicators such as hunger indices, health outcomes, food availability, food access and food use³⁰. Along with the food security Atlas, I also draw from different government documents.

Subsequently, particularly for Bihar, I draw from Village Dynamics of South Asia data as well (Annex 6). There is possible heterogeneity in terms of food preferences (eastern Bihar for example has greater non-vegetarian food consumption). There are household and location specific differences also in terms of own capacity to provide food, access to food from outside sources (some districts have better roads, are nearer to big cities and have more developed markets) as well as family needs based on size and composition. Specifically, related to PDS and food delivery mechanisms, there is likely heterogeneity emanating from distribution of PDS shops/ their control and quality of governance. Across districts, the endowments, and agricultural performance also differs quite significantly.

Figure 4 presents the maps of the districts in Bihar in terms of specific characteristics highlighting the significant spatial heterogeneity in terms of factor endowments, agricultural production and market access. Inter alia all these differences together and interactively bear on the needs for the food subsidy programme and the forms it should or would take.

³⁰ In relative terms they are likely to be the same even though in absolute terms they might have altered. Unfortunately latest atlas was not available at the time of writing.

Figure 4: Maps of the districts in Bihar



Source: Author's illustration using GIS mapping³¹

³¹ For maps data:

1. Rice and Wheat production data: Directorate of Economics and Statistics, Department of Agriculture, Cooperation and Farmers Welfare, Government of India (<https://eands.dacnet.nic.in/#>)
2. Number of markets Map: <https://agmarknet.gov.in/>
3. Urbanization data: Census, 2011
4. For rain fall data: Planning & Development Department (Directorate of Economics & Statics, Bihar, Patna)

In the food security atlas of Bihar, the unit is the district. Subsequently, VDSA allows me to assess within district heterogeneity (at the household level).³² The specific elements of heterogeneity that would be relevant for the issue at hand are as follows:

- (i) Bihar has significant agro-climatic variability, having faced one of the highest year-to-year fluctuations in agricultural production. Some areas in Bihar are highly flood prone (Northern Bihar) while others face frequent droughts.
- (ii) Though Bihar is the least urbanised among major states, there also is significant variation across space. While Patna is the most urbanised district (at 42 percent), Kaimur is the least urbanised (at 3.2 percent).
- (iii) A significant proportion of rural population in Bihar is landless.
- (iv) Studies such as the one from Institute of Human Development (IHD) show that there is a period of near starvation for at least two to three months (from August-September to October-November), coupled with a period of general food shortage for at least another two to three months during other off-seasons (Sharma, et al. 2000). Importantly, the study shows that the period of shortage and starvation varies widely across regions and population groups. The period of food shortage is longest for SCs, agricultural labour and smallholder farmers who depend mainly on currently produced cereals.

In terms of these indicators, the food security atlas of Bihar categorizes districts into five groups.

- (a) Food Secure (S),
- (b) Moderately Food Secure (MS),
- (c) Moderately Food Insecure (MIS),
- (d) Severely Food Insecure (SIS) and
- (e) Extremely Food Insecure (EIS).

Based on these categories listed above, the districts in my research projects fall in the following category: Patna (Moderately Insecure); Darbhanga (Severely Insecure); Banka (Severely Insecure); Munger (Moderately Insecure) and West Champaran (Moderately Insecure). There are also substantial differences in poverty across regions and social groups

³² Refer Annex 6

in Bihar. Southern Bihar has a higher incidence of poverty at 44.1 percent than the northern region at 41.6 percent. Also, in Bihar poverty is highest (64.2 percent) among Scheduled Castes (SCs), followed by Scheduled Tribes (STs) (56.2 percent) and Other Backward Classes (OBCs) (38.5 percent). More significantly, in terms of the nutritional status, Table 5 shows the low nutritional status of children as well as the poor food security and socio-economic conditions of the districts.

Table 5: Nutritional status of children and Food security and socio-economic conditions districts

(The districts listed here are part of my research site)

Indicators	Patna	Darbhangha	Banka	Munger	West Champaran
Nutritional status of children					
Stunting (%) among children<5	43.5	49	46.6	46.6	43.6
Wasting (%) among children<5	28.5	16.6	26	21.5	21.7
Underweight (%) among children<5	43.3	41.1	48.5	43.7	39.1
Food security and Socio-economic conditions of the districts					
HH share of expenditure on food (%)	48.6	48.1	57.6	52.1	49.9
HH share of food expenditure on cereals (%)	33	34.1	38.7	41.1	37.4
HHs in the district involved in agriculture (%)	32.1	47.3	60.1	50.1	49.8
HHs BPL (%)	37.4	39.4	39	61.2	29.1
HH ownership of agricultural land (%)	29.7	49.2	53.7	21.8	47.2
HHs living in a <i>pucca</i> house (%)	70	55.2	33.7	57.5	40.4
HH access to electricity (%)	57.1	15.8	16.4	34.3	46.1

Source: POSHAN/IFPRI district profile (2018)³³

Even though connectivity in general has improved over time in terms of paved roads, there still is significant variation across districts. The districts that are part of my primary data collection show variations in infrastructure with Patna having best connectivity, followed by Darbhanga and Banka in that order. The food security atlas of Bihar also shows significant spatial variation in rural wages, food and non-food expenditure, structure of labor force, proportion of Scheduled Castes and Scheduled Tribes, dependency ratios, female literacy and workforce participation.

³³ Prepared by POSHAN-IFPRI, these are District Nutrition Profiles (DNPs) for 640 districts in India. These draw on diverse sources of data to compile a set of indicators on the state of nutrition and its cross-sectoral determinants.

Another important factor in case of PDS relates to the social identity of the Fair Price Shop (FPS) dealers. While districts like Saran had 15 percent-woman FPS dealers, Vaishali had just 2 percent women FPS dealers. Both Patna and Darbhanga had 11 percent women dealers in FPS (Economic Survey Government of Bihar 2014). Differential needs and preferences could also emanate from variations in delivery mechanisms. The type of local PDS dealer for example can engender heterogeneity. There can be several differences in functioning but one of the important factors is whether the household and the dealer are of the same caste. The social backgrounds of PDS dealers in Bihar are presented in Table 6. Based on the Government of Bihar economic Survey, the total number of PDS dealers is 42,451 as on September 2014. Among them, the share of backward and extremely backward castes among the dealers is about 36.5 percent, that of scheduled castes 16.2 percent, and upper castes 19.5 percent.

Table 6: PDS dealership (as of September 2014)

	Number of PDS outlets	% share
SC	6857	16.2
ST	323	0.8
BC	12445	29.3
EBC	3068	7.2
Minority	3036	7
Women	3387	8
Women self-help groups	202	0.5
Other self-help groups	118	0.3
Cooperative society (Ex-Army personnel)	4579	10.8
Handicapped	177	0.4
General	8259	19.5
Total	42451	100

Source: Economic Survey 2014, Government of Bihar

Finally, households differ in the likelihood as well as actual state of migrating or having a migrant in the family. Since migrants send remittances it can create differentiation in terms of food security status and reliance on PDS (VDSA data).

3.7.2 Odisha state context³⁴

Located in eastern India along the Bay of Bengal, bordered by Andhra Pradesh in the South, West Bengal in the North, Jharkhand in the North West and Chhattisgarh in the West, the state is home to 41 million people (11th most populated state in India). As per the Census 2011, the population of Odisha forms 3.47 percent of India's population. The Scheduled Caste (SC) and Scheduled Tribe (ST) population comprised 18.9 and 23.6 percent respectively of the total population of the state (NSSO- 64th Round).

Odisha is home to some of the primitive tribal communities (62 tribes including 13 primitive tribes) (India census 2011). However, within the state, there are wide differences across districts in the composition of the population by social group. The state is divided into 30 districts for administrative purposes. In terms of spatial heterogeneity related to topography, the state is marked by a wide range of physical features. Based on physiographical characteristics, the state is divided into 5 major regions: The Coastal Plains in the east, the Middle Mountainous and Highlands Region, the Central plateaus, the western rolling uplands and the major flood plains (Government of Odisha website). Moreover, Odisha can be divided into two natural regions, coastal and high land. Marked by rugged and undulating topography, the highland regions are mostly covered by forest. In these areas, the tribal population relies on forest resources for livelihood and food security. My sites cover districts from these areas dominated by tribal population.

As per the Odisha Food atlas report (2009), while the state has a high coverage of forests, a large proportion of the forests however stand degraded. Degraded forests constitute almost 40 percent of the total wasteland and this has posed challenges for tribal population's livelihoods and food security. Otherwise in agriculture, low irrigation, low use of fertilizers, has led to an average yield as low as 1210 kgs/ha (compared to all India average of 1930 kg/hectare) in rice i.e. the main staple. With limited consumer preference for substitution, such low yields in the principal crop translate into low farm incomes.

³⁴ Most of the descriptive-data for this section has been drawn from Odisha Food Security Atlas prepared by MSSRF and WFP (2009).

Primarily an agrarian state, rice is the major crop in the state, and there is little diversification of agricultural output, and rice contributes to more than 64 percent of overall production. The bulk of economic activity in Odisha takes place in the primary sector comprising mining, quarrying, agriculture, fisheries, livestock production and forestry. This implies that almost two-thirds of the total workers of the state are either cultivators or agricultural laborers.

Generally regarded as one of the least developed states in the country, according to the Food atlas data, almost 46.8 percent of the population lives below the poverty line compared to 46.3 percent in Jharkhand, and 42.1 percent in Bihar.

The state also shows a clear regional concentration of poverty. Poverty is highest in the southern region followed by the northern region. In fact, there is a contiguous zone of acute food insecurity which comprises all the districts of the Eastern Ghats and the adjoining coastal districts. Further, within this zone there is a group of four districts that require urgent and sustained attention and one of my research district 'Kandhamal'.

A regional analysis of the Food Security Outcome Index (FSOI-See Annex 3) in the Food Atlas notes that both Kalahandi and Kandhamal (both my research sites) lie in the severely food insecure and extremely food insecure categories respectively. My survey was conducted in 20 villages of Odisha, across the two districts of Kalahandi and Kandhamal. (See Table 7 for an overview of the districts' profile). Demographic characteristics of the district reflect that it is predominantly rural and has a high concentration of ST and SC communities. The average land holding size in the district is 1.62 ha per household, however land is mainly rainfed and on slopes. Agriculture is the main source of employment.

Table 7: Odisha districts of Kalahandi and Kandhamal at a glance

Demographic profile	Kalahandi	Kandhamal
Total Population	15,76,869 (in lakhs)	7,33,110 (in lakhs)
Female	50.10%	50.90%
Rural	92.30%	90.10%
SC	18.20%	15.80%
ST	28.50%	53.60%
Others	53.30%	30.7%
Nutritional status		
Stunting	44.60%	29.20%
Wasting	26.90%	26.80%
Underweight	52.80%	23.00%
Food security and Socio-economic conditions of the districts		
HH share of expenditure on food	52.1	50.5
HH share of food expenditure on cereals	41.2	38.5
HHS in the district involved in agriculture	54.1	30.9
BPL	64.2	56.6
HHS living in a permanent house	48.4	34.5
HHS with access to electricity	22.5	27.2

Source: POSHAN/IFPRI district profile (2018)

Even though literacy rate in Kalahandi has increased from 6.3 percent in 1951 to 60.22 percent in 2011, it is still below the State average of 73.5 percent. According to the Food atlas report, the literacy among SC communities is better than the average literacy rates in the district for both males and females. The overall ST literacy rate has increased from 5.8 percent in 1961 to 34.2 percent in 2001 i.e. over a period of 40 years. However, both male and female literacy rates within ST communities are less than the district average and those for SC communities. Though women have historically outnumbered men in Kalahandi with the sex ratio of 1003 females per 1000 males, one of the major concerns, however, is the population of girls in the 0-6-year age group that has fallen sharply as compared to boys in the same age group. The proportion of girls in the 0-6-year age group is only 48.64 percent. This yields a sex ratio of only 947 girls for 1,000 boys in the 0-6-year age group as per the 2011 census.

Kandhamal district is centrally located and has a hilly terrain. The scheduled tribes (ST) account for 53.6 percent of the district population as per the 2011 census. Out of 62 tribes notified as scheduled tribes in Odisha, as many as 29 tribes are found in Kandhamal and among them Gond, Kandha, Saora, Kandha-Gouda and Kutia Kandha constitute the majority. About 65.38 percent of the district is under forest cover. Ninety three percent

population of the district is rural, and the economy is mostly based on agriculture and forest produce with very limited industrialisation. Agriculture, horticulture, forest produce, and micro enterprises are the main sources of livelihood in Kandhamal.

Like Kalahandi, the one indicator that stands out in case of Kandhamal is the sex ratio which was 1,008 in 2001 and it further improved to 1,037 in 2011, the highest in the state, and is generally attributed to the higher status of women among scheduled tribes. However, the sex ratio in 0-6-year age group has worsened from 970 in 2001 to 960 in 2011.

Since agriculture in the district is characterized by small land-holdings, difficult terrain, traditional cultivation practices, limited irrigation, poor water conservation measures, low productivity, limited crop diversification and low yields of food grains, Kandhamal has high incidence of poverty. Though the district economy has diversified over the years, nearly 70 percent of the work force (cultivators and agricultural laborers) still depend on agriculture and allied sectors. With largely rainfed agriculture they remain economically vulnerable. These factors imply a significant need for food-based safety net programmes like the PDS.

3.7.3 Uttar Pradesh (Eastern)

According to the UP-food security atlas (2009), the state accounts for nearly 7.3 percent of total area of the country, while its share in the country's population is 16.2 percent. UP comprises 70 districts, 300 tehsils and 813 development blocks and has 52,028 village panchayats covering 97,134 inhabited villages³⁵. Most Eastern UP villages are small, with an average population of around 3,194 per panchayat. The state is divided into four regions i.e. western, central, eastern and Bundelkhand. Situated in the Indo-Gangetic plain and intersected by rivers, the region has a high population density and the dominance of agriculture as an economic activity.

Almost 60 million people in UP live below the poverty line (Planning Commission, GOI 2013). The variation in poverty levels among districts is very stark. The relatively developed

³⁵ Tehsils, development blocks and village panchayats refer to the sub-national/sub-state/sub-district administrative regions in India. A group of blocks comprise a tehsil; while a block comprises several villages or village clusters. Village Panchayats are the smallest administrative units at the village level, a form of local self-governance system.

western region has a lower incidence of poverty than other regions mostly eastern and central.³⁶ Significant heterogeneity thus holds for UP, which not only has large variations across four regions (terribly backward Eastern and Bundelkhand; moderately backward Central and rather developed Western regions), but also between districts within the same region.

The average size of holding is only 0.86 hectare, and 75.4 percent holdings are below one hectare. Like the rest of India, in Uttar Pradesh too the productivity of labor is least in the agriculture sector. Above 70 percent of the workers are engaged in the agriculture sector and contribute only 30 percent to the GDP. On the other hand, only around one percent of the workers are engaged in mining and quarrying but contribute one percent to the GSDP, and 20 percent of the workers are engaged in manufacturing but contribute 15 percent to the GSDP. One of the probable reasons for the low productivity of labor in agriculture could be ascribed to the social fabric of the state itself, with the inherent power dynamics between the laborers and landowners, the complex working of the “caste domination and other pre-capitalist oppression of agricultural laborers”, and the “politicization of the farmers” for electoral gains, among other factors (Lerche 1998; 29-30; Sharma and Dreze 1996)

The food insecurity map of rural UP paints a somewhat grim picture. Out of the total 70 districts, 28 require priority attention from the Government to ensure food security. There is a contiguous zone of acute food insecurity in the state - many districts of southern region adjoining Bundelkhand and central region, which extends from Lalitpur to Pilibhit and the eastern Gangetic region up to Maharajganj. The districts are inhabited by substantial Scheduled Caste (SC) population and high proportion of agricultural laborers with low wage rates. Also, in general, the districts of Uttar Pradesh fare poorly on nutritional outcomes, and food security and socio-economic indicators (see Table 8 for Maharajganj).

³⁶ These are some of the wealthiest districts in the country, as they experienced the Green Revolution (Rastyannikov 1981; Bhatia 1985)

Table 8: Maharajganj district at a glance

Demographic profile	Maharajganj
Total Population	26,84,703 (in lakhs)
Female	48.5 %
Rural	95%
SC	18.4%
ST	0.6%
Others	81%
Nutritional status of children	
Stunting	55.8
Wasting	23.3
Underweight	53
Food security and socio-economic condition	
HH share of expenditure on food	48.9
HH share of food expenditure on cereals	31.7
HHS in the district involved in agriculture	64.4
BPL	39.5
HH ownership of agricultural land	70.3
HHS living in a permanent house	70.4
HHS with access to electricity	21.8

Source: POSHAN-IFPRI district profile (2018)

The literacy rate in Uttar Pradesh is lower than the Indian average for both the poor and non-poor population. Female literacy rate is also low. Rural connectivity such as road infrastructure is also poor in most of the food insecure districts (Dreze and Sen 1997). UP is a major food grain producing state and its specialization is in rice, wheat, chickpea and pigeon pea. The average yield of major crops in the state are considerably lower than those in the agriculturally developed states like Punjab and Haryana. Many factors are responsible for low productivity and slow growth of agriculture in the state, with explanations ranging from smallness of holdings to price distortions. The large numbers of the poor coupled with regional disparities and within region social, economic and power differentiation makes Eastern UP an ideal case for studying the needs and preferences for an SSNP like the PDS.

3.8 Villages profiles of qualitative research sites

Qualitative research was conducted across three villages each in the Patna district of Bihar. For the sake of anonymity, I will refer to them as B1, B2, B3; two villages each across the two districts of Kalahandi and Kandhamal in Odisha (referred as O1, O2, O3 and O4); and two villages in the Maharajganj district of eastern UP (referred as UP1 and UP2). In this

section I briefly describe the broad contour of my research sites, but the lived experiences of the local people, their perspective, the power dynamics therein, their identities, are covered in detail in my empirical chapters, that brings out the specificity of the context more clearly.

3.8.1 Bihar villages

Patna district Villages: B1, with about 722 households, is one of the largest villages amongst the three villages surveyed in my research project. However, 479 households out of these are labour households. Among the landed class, majority are small and medium size farm householders while large size farm households constitute only about 8.31 percent. Located about 40 kms from the district headquarters, Patna, the village has a diverse caste population, dominated by the *Bhumihars* (upper caste group), and followed by OBCs and SCs. *Bhumihar Brahmin, Kankubj Brahmin, Koiriee, Chamar, Dusadh, Pasi, Nutt, Kanu, Teli, Nayee, Kumhar, Badhai* (Carpenter), *Dom* etc. are among the different caste groups in the village.

In terms of socio-economic characteristics, the literacy rate is high as compared to the other two villages. Compared to other two villages, B1 has better infrastructure facilities. It relates to *pucca* roads from all sides. Even the streets of the village have brick soling (paved roads). It has schools, a post office, a bank and a primary health care centre. Out of the three FSP shops in the *gram panchayat*, two of them are in this village. Post the roll out of the NFSA, there were few SC households without ration cards. While crop agriculture is still the main occupation, a significant percentage of the population have dairy farming as their principal occupation too. Among different caste groups, migration of OBC and SCs is common and widespread and the reasons are varied (for example employment, education).

B2, comprising around 500 households, located at about 55 km from the Patna city, the village has a good road connectivity too. Across social castes, OBCs constitute around 50 percent of the households; 30 percent households are scheduled castes and 20 percent are forward castes. Most of forward caste households belong to *Bhumihars*, whereas *Kahars* dominate in the OBC category and *Chamars* and *Dusadhs* are in majority in the scheduled caste category.

The average landholding size of 1.18 acres is higher than in most of the villages in Bihar. Agriculture is moving from manual to mechanized operations in this village. Tractors, diesel engines and threshers are a common sight. Besides agriculture, non-farm employment like construction laborers, taxi drivers, and even income from salaried jobs is quite significant. The village has one FPS shop and schools. Being a politically active village, the distribution of NFSA cards was highly contested amongst the villagers. While some poor households got left out, few upper caste better off households got access to the cards (see chapter 4, section 4.5).

B3 village, a homogenous group in terms of the caste composition, but differentiated by class, compared to the other villages of B1 and B2 is dominated by the ‘*Yadavs*’, the OBC. Out of the 450 households, 371 belong to the ‘*Yadavs*’, except for one SC household (*chamar*), the rest too are from OBC category (example *kanu, teli, barber, washerman*), but of lower rank than the ‘*Yadavs*’. Like other villages, agriculture is the main occupation. Both men and women are equally engaged in farming operations.

Around 90 households are landless, and are engaged as agricultural laborers, while the rest are primarily small and marginal farmers. Due to lack of employment in the village, around 10 percent of the households have migrated to the nearby states as agricultural and construction laborers, including working as laborers in the dairy industry. Hence a substantial number of households in this village comprise FHH, being able to independently operate their financial dealings with the bank.

Some of the households are engaged in livestock rearing, mainly limited to cows and buffaloes. Relative to other two villages, B3 has bad road connectivity where by access to the village is quite taxing. The village has three FPS shops. Of the three villages in Bihar, B3 was the worst off in terms of infrastructure and PDS working.

3.8.2 Odisha villages

Kalahandi district Villages: Villages O1 and O2 in the Kalahandi district of Odisha are in remote areas with high density of poor households, poor infrastructure and bad road connectivity. The layout of village O1 is divided into two hamlets inhabited by OBCs, SC

and STs in one and general category in another. In terms of caste composition, the majority are from OBC, followed by SC, ST and general category. In terms of other facilities such as banks, FPS shop (the only one in the *gram panchayat*) both are located far away from the village.

With the roll out of the NFSA, around 10-15 percent of the households did not have a ration card, despite being poor and eligible for it. In comparison, Village O2 is a smaller village with just about 40-50 households. In this village majority belong to the tribal community, followed by SC (Harijan). In this village, unlike Village O1, majority of the households had the new NFS ration card. Interestingly in both the villages, the *sarpanch* (village head) was a woman.

In the Odisha villages, even the FSP shop licence operated differently from other states. In the surveyed villages, the FSP licence is issued in the name of the *sarpanch* and the secretary, a government employee, and not the dealer. So, every month, the dealer must make a demand draft for food ration that get it signed by the *sarpanch*. The woman *sarpanch* in this village being a widow and not literate operated as dictated by the secretary (Chapter 4, section 4.5). In both these villages, since the FSP shop is located at a distance, it is generally men who usually make this trip to procure grain.

Kandhamal district Villages O3 and O4 too are in the remote areas, around 65 kilometers and 50 kilometers respectively, away from the district headquarter. Both villages had only one hamlet with majority belonging to ST, followed by SC, OBC and very few general category households. While village O3 has about 200 households, O4 is small with just about 80-90 households. These villagers mainly worked as agricultural laborers. Like other villages, in these villages too some of the eligible households were left out. While in Village O3 the discrepancy in NFS card distribution was quite stark, in O4 it was comparatively less.

3.8.3 Uttar Pradesh (eastern) villages

Maharanjanj district villages: The village UP1 has about 118 households, with majority of the households belonging to the SC category (*Sahni, Gaur, Chamar* caste), while UP2 with about 480 households had majority in the OBC category (*Patel, Bhar, Kewa, Maurya* caste).

In both villages, the main economic activities are agriculture, followed by casual labour either employed outside the village or in agriculture within the village. The average landholding size is not more than 0.30 acre, and most are marginal farmers. There are no large farmers in these villages.

Though NFSA was rolled out in the year 2013-2014, NFS ration cards were not issued by the government during the time of my field work. Interestingly, in both these villages, since 2005 no new ration cards have been issued. In these years while the number of households have increased, the number of ration card holders remains the same. In UP1 only 80-90 households had the ration card. Among them majority had the APL card (entitled only for kerosene oil, only 12-15 household had BPL card and AAY beneficiary were only about 4-5 households. The situation was similar in UP2 too, with only about 80-90 households were card holders (in the category of APL, BPL and AAY). In UP1 there was no PDS shop, and villagers had to go to the neighboring *gram panchayat* to collect food grains, while UP2 had one PDS shop.

3.9 Descriptive statistics

In this section, I present descriptive statistics based on the survey data for the three states which highlight the heterogeneity discussed above. I focus on elements that are engendered through varied preferences (for example preference of rice versus wheat or variety of rice), socio-economic and even political structure. In the three states, after the introduction of the Targeted PDS and National Food Security Act (NFSA), substantive changes have taken place in terms of eligibility, entitlement and delivery mechanisms that forms a basis for relevant heterogeneity.

Evaluation studies of the TPDS show large scale leakages of the grains from reaching the intended rights-holders for example Umali-Deininger et al. (2005) and Khera (2011a), note that there has been increased grain allocation and disbursement in most states after the TPDS expansion. Khera (2011) associates seven large states with well-functioning PDS, including Odisha. Uttar Pradesh was categorized as a state with improving PDS. Though Bihar did not figure in here, later studies have argued in favor of revived PDS in Bihar as well (Khera 2011).

3.9.1 Eligibility for services

One of the basic determinants of access to PDS is possession of a ration card that signifies several things. On the one side, it captures the propensity to demand PDS grains, it can also present the institutional quality in delivery systems. Moreover, it can signify the lack of access because of social, economic or political factors. Having a ration card is a necessary but not a sufficient condition determining access.

In terms of their experience in getting ration card, which can be an important determinant of their needs and preferences, in the three states, a significant percentage reported that they get their ration card from the village panchayat (local self-government organization) and that they do not have to bribe or pay commission, nor had to use political connection. While in Odisha and Bihar, over 95 percent rights-holders report that they did not pay bribe or commission, nor did they use any political connection, in UP the percentage seems significantly lower at 84 percent and 80 percent respectively.

It is often claimed that democratic decentralization leads to empowerment of local political bodies and creates more accountable institutions. The role of local government bodies in ensuring access and entitlement is an important measure of the effectiveness of local government. It is then important to assess how far the functioning of the *Panchayats* affect the experience with PDS and thereby determine the needs and preferences of the rights-holders (refer Chapter 5, section 5.2).

At a more general level, to assess how a household is linked with government schemes and programmes, as a marker of engagement, I also collected information on possession of *Aadhaar* card which is biometric based unique ID card. This card has started being used for some government programmes to minimize the presence of ghost beneficiaries. In terms of *Aadhaar* card holders, in Odisha the percentage is 96 percent, followed by UP with 95 percent and Bihar with just 75 percent.

3.9.2 Last node of delivery: The Fair Price Shops

Conditional on eligibility, experience with the PDS depends on the last node of delivery i.e. the Fair Price Shop (FPS). In terms of the norms of the PDS control order (2001), though it is mandatory to have display boards containing the correct information about entitlement, availability of food grain and the issue price, the empirical reality is different. Lack of awareness about entitlement and issue price among rights-holders is endemic. How aware the rights-holders are of their entitlement goes a long way in determining how well they can articulate their needs and preferences.

In Odisha, 87 percent reported knowing what commodities are sold and in what quantities by a FPS owner, while 89 percent reported that they knew the price, and that nearly 92 percent kept their ration card with themselves. In Bihar, the proportion of rights-holders aware of the type of commodities sold in PDS is about 67 percent, though much better performing than UP, still significantly lower than Odisha. In Bihar only about, 35 percent were aware of the mandated prices. This is striking considering that 98 percent respondents claimed that they keep the ration card with themselves.

3.9.3 Price and quantity as elements of PDS delivery

With regards to the perception about whether they get the right quantity and price of grains and the timeliness of its availability, in Odisha nearly 95 percent felt that they get the right quantity and price fixed by the government (Figure 5). In comparison, a low proportion of respondents in UP, about 14 percent and around 38 percent in Bihar on average felt that they get the right quantity at the price fixed by the government.

Figure 5: Perceptions about receiving right quantities and price from the PDS

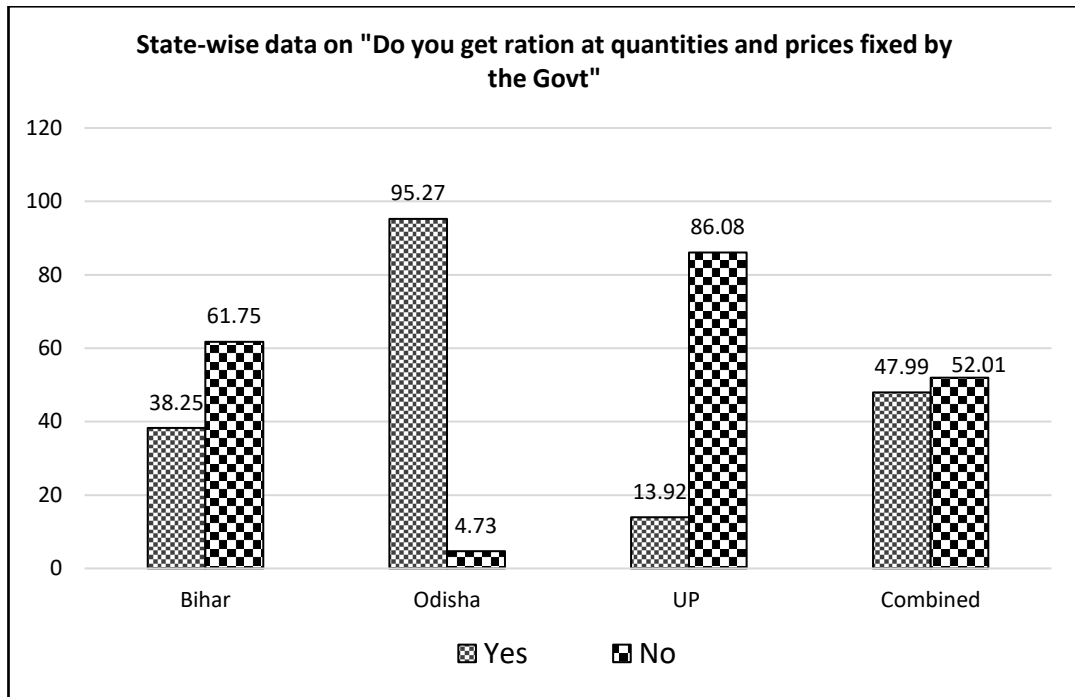


Figure 6: Perception based on gender receiving right quantity and prices

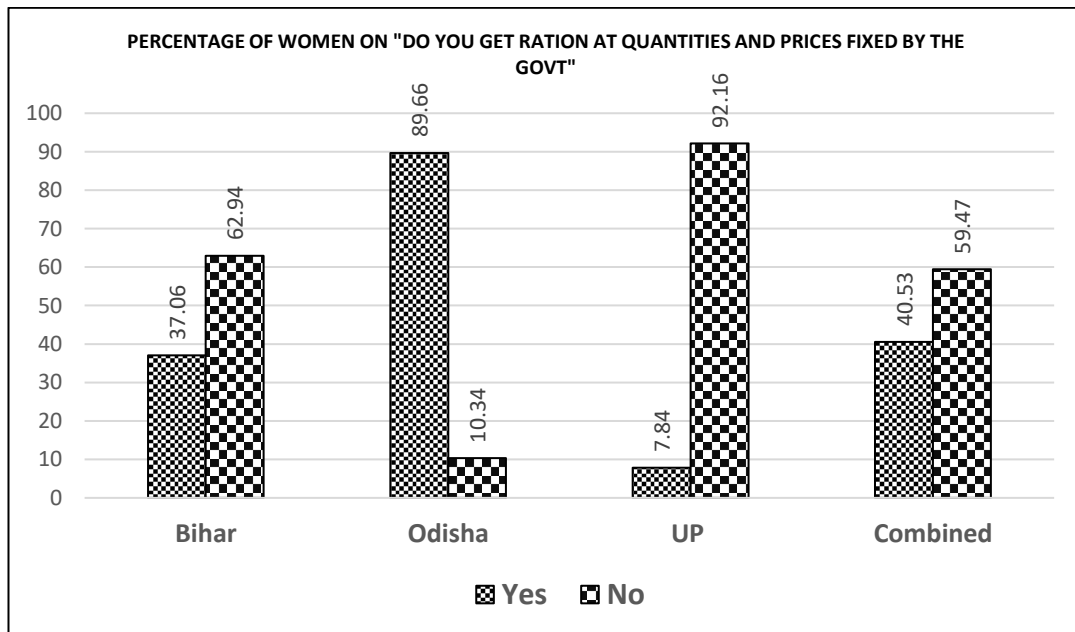
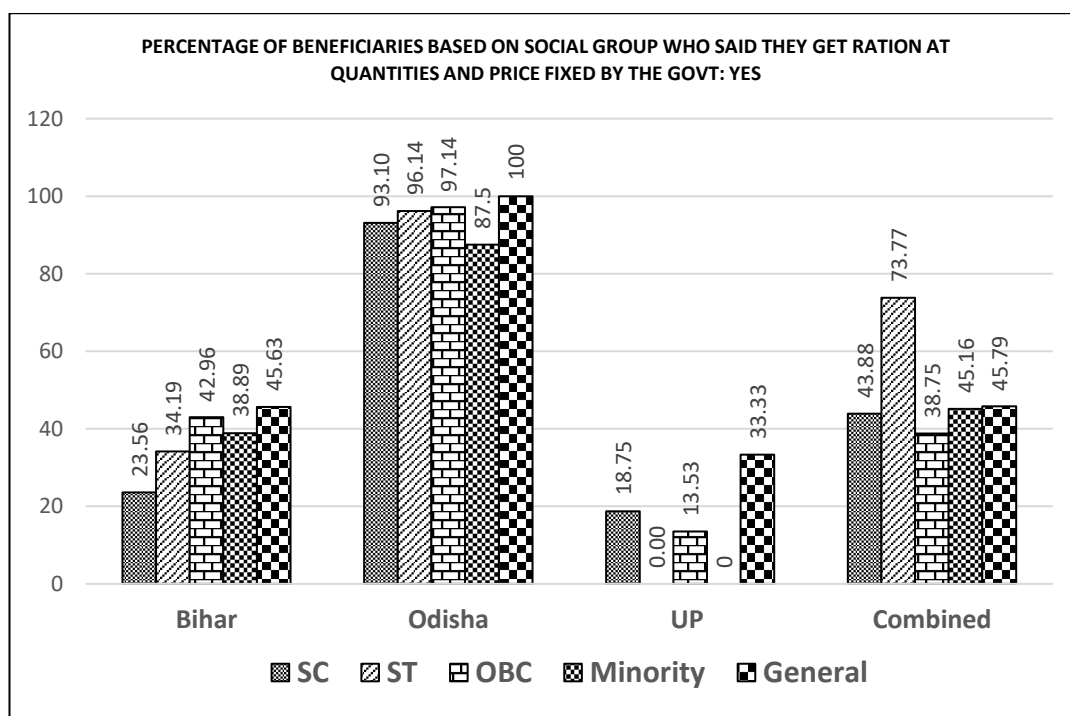


Figure 7: Perception based on social group: receiving right quantity and prices



Disaggregating by gender, in Bihar a very low percentage of women (37 percent) felt that they get the right quantity of PDS grains at the right price (Figure 6). In UP, a very low percentage of both women and men felt that they get the right quantity and price (8 percent women and 16 percent men). Odisha, a significant percentage of both women and men stated that they get the right quantity at the right price. Overall, percentage of men who perceive getting the right quantity and price is comparatively high 51 percent for men and 41 percent for women.

Among social groups, figures reiterate the pecking order. 24 percent SC and 34 percent ST in Bihar and around 19 percent SC and 14 percent OBC in UP concur that they get the ration with the right quantity at the government subsidized price (Figure 7). This seems to be more pronounced amongst women and men from lower caste in both Bihar and UP (8, 10).

Figure 8: Perceptions by gender and social identity in Bihar

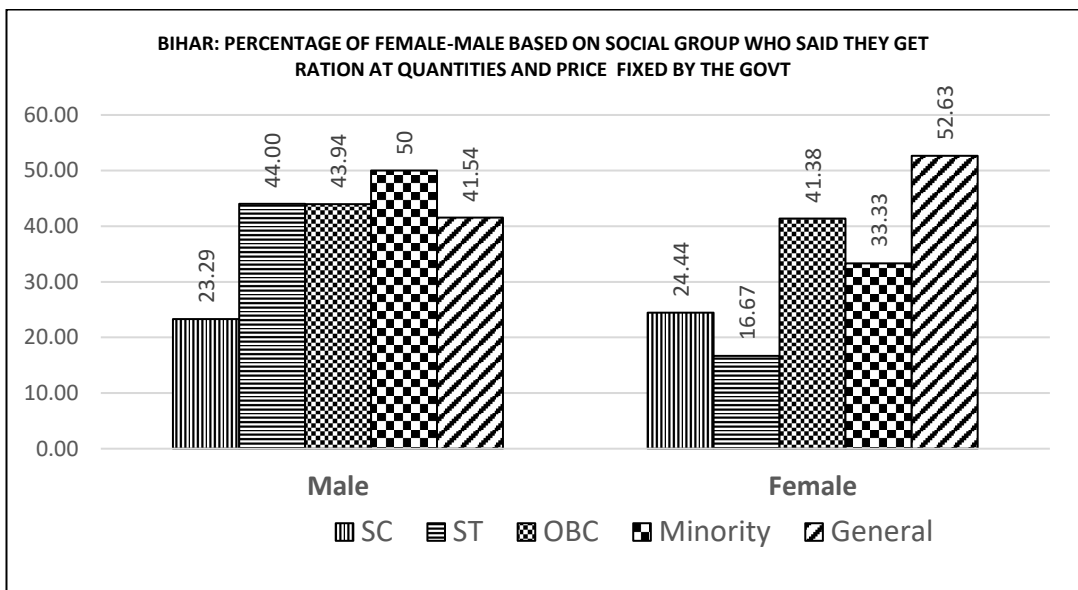


Figure 9: Perceptions by gender and social identity in Odisha

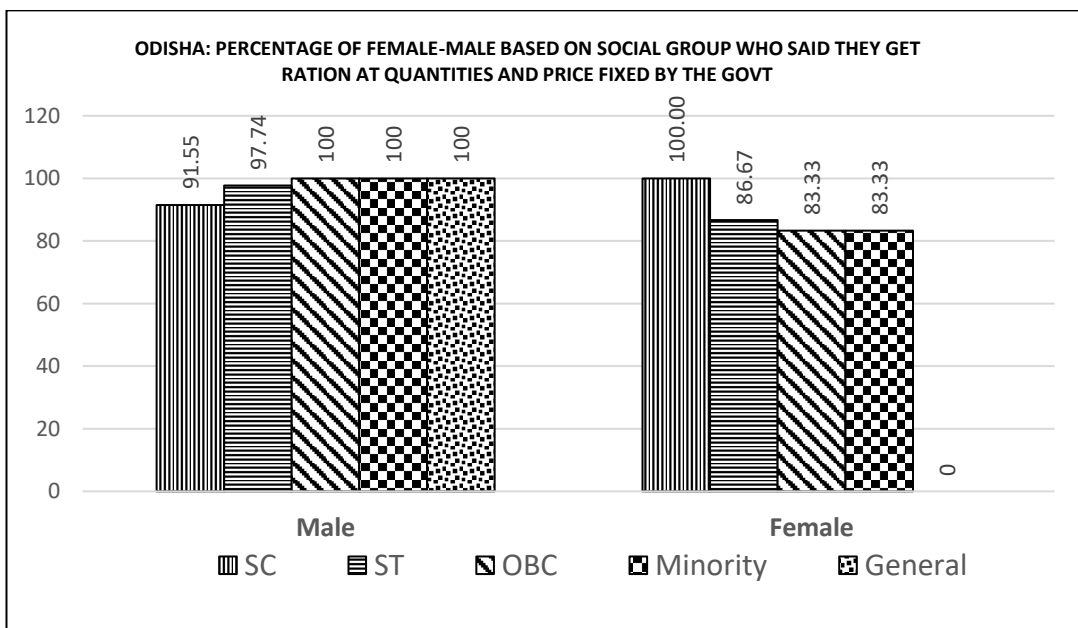
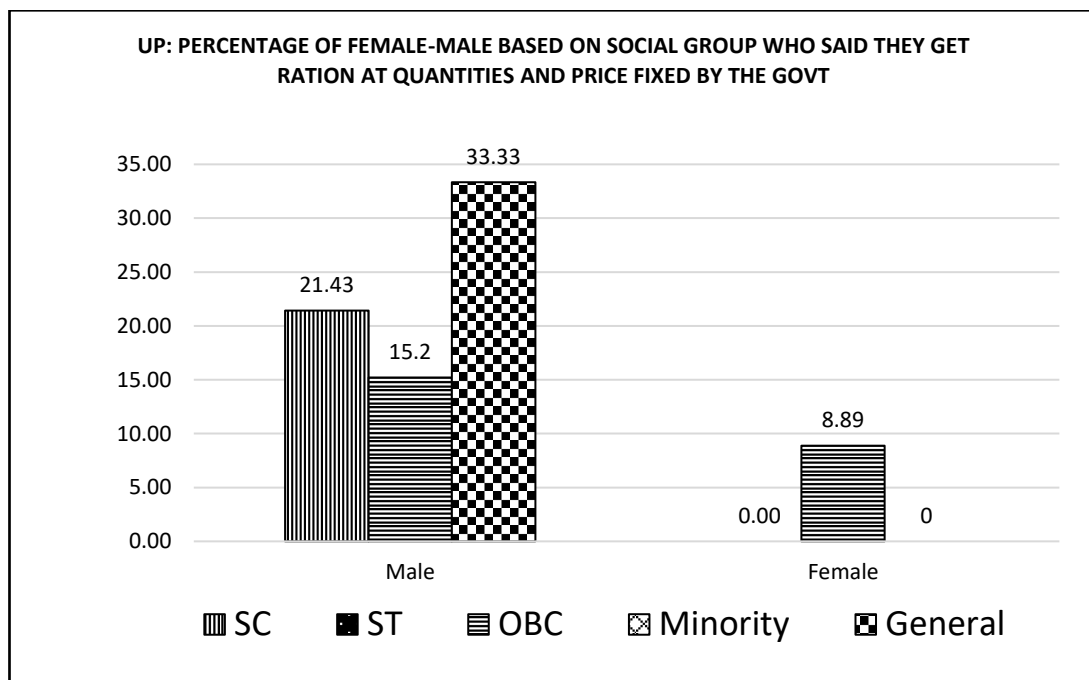


Figure 10: Perceptions by gender and social identity in UP



In Bihar, only 24 percent SC-women, 17 percent ST-women, around 41 percent OBC-women and similarly a very low percentage of SC-men seem to perceive that they get the right quantity at the right price. In UP observed with 0 percent SC-women, 9 percent OBC-women and only around 21 percent SC-men and 15 percent OBC-men think that they get right quantities and price. However, Odisha seems to be doing well on this front.

3.10. Summary

In this chapter, I have explained my primary data collection methods (both quantitative and qualitative) that involved a household survey, including qualitative methods, in selected communities across the three states of Bihar, Odisha and poorer parts of Eastern Uttar Pradesh. In addition, I have explained how I capitalised on the strengths of both the data set to provide a richer analysis.

In the analysis of my quantitative survey, I have assessed the role of the individual, household as well as community level factors in determining the valuation and utilization of the PDS that bear on needs and preferences of the rights-holders. Following the methods, I

examined the sample composition, and then outlined my context, including the heterogeneity embedded therein. Across the three states, the heterogeneity is quite stark, with distinct differential socio-economic characteristics. Following the context, I have examined and discussed the relevant data and descriptive statistics also related to the perceptions and relevant information related to the PDS. What is interesting is the significant differentiation based on gender and social status, with these variables intersecting in shaping the experiences with PDS. Even in well-functioning PDS, men and women benefit but where it is not functioning well, women disproportionately get a raw deal. Regional/locational heterogeneity is pronounced. In my next Chapters I present the empirical work of my research project.

Chapter 4: Intersectional Dynamics of Gender, Caste, Class, and Power in Experiences with PDS

Axes of social power like gender, caste and class shape access to economic resources and markets including the PDS. Conditional on access, these also affect the experiences in dealing with the PDS, including the quality of services. Thorat and Lee (2006) see exclusion as prohibition from participation as well as discrimination i.e. participation with a negative distinction. Towards this it is pertinent to visit the economic theories on discrimination. Two main theories of discrimination are about statistical discrimination (Akerlof 1984) and “taste for discrimination” (Becker 1967). In application, these theories have been mainly used for labor markets but apply to other markets as well such as PDS. In the first case, imperfect information about the beneficiary about their capacity to protest, seek compensation, make dealers and other agents in the system use group identity as a proxy for malleability. In Becker (1967), individuals discriminate because they have a taste for doing so. Denying rights within PDS to the lower caste, women or economically less powerful might provide utility to the PDS dealers or other agents. Theories could be used to address discrimination based on any definition of identity (gender, caste, religion).

Food constitutes the basic element for a functioning life, hence access to food cannot and should not be mediated through social hierarchies and identities. For Throat and Lee (2006), the most basic indicator of access to the PDS relates to the presence of a fair price shop at the local level. They note that women, especially of the lower caste are often prohibited from participation, if not actively discriminated against. In their five-village study, they cite four forms of “discriminatory practices” against the Dalits (lower caste) – “discrimination in quantity, discrimination in price, caste-based favoritism by the PDS dealer, and practices of “untouchability” by the PDS dealer” (Ibid: pp. 4200). But following Ribot and Peluso (2003), I take a wider view, looking at the workings of power across different elements of the supply and demand of PDS.

Social and economic hierarchies based on gender, caste and class are likely to be more pronounced in rural areas (Basu and Das 2014). These effects of gender, caste and class can work from both demand as well as supply side. If some groups are discriminated against, they might not find it worthwhile to access the PDS. Hence, there can be self-selection into

accessing PDS with the households who are discriminated against choosing to opt out of the PDS system altogether.

On the other hand, with differentiation and without commensurate policy and institutional responses, there can be screening (of being excluded from the programme). Based on the selection mechanisms' functioning or administrative tools, households may not be able to access the PDS. Some households could then be denied access, and these could comprise women, weaker sections based on caste, gender or economically and politically less powerful.

Even without selection or screening, social identity can bear on the intensity of engagement as well as the quality of services rendered. In terms of quality, there can be compromises in access in terms of lower quantities of grains than entitled to and higher prices than mandated. Even if the prices charged and the quantities disbursed were adequate, there are ways in which some groups could receive suboptimal access in terms of the quality of grains or the general service experience of waiting time, harassment or just lack of treatment with dignity (Grace Carswell 2016, personal communication, 8th November).

Drawing from both quantitative and qualitative data I empirically investigate the role of identities and the intersectionality of the different axes (of gender, caste and class) with a focus on heterogeneity.

4.1 Intersectionality: Castes, gender and class interactions determining access to and experiences with the PDS

I consider three groups: gender, caste and class with class—as differentiators for access to the PDS and the quality of services experienced. I use class as a separate identity in line with the vast literature in feminist sociology that focuses on inequalities in access to land, of incomes, and in access to employment. Instead of treating these axes as three separate dimensions, I examine the interactions among these and their effect on access to PDS and the quality of access. Beteille (1992) too while exploring the relationship between race, caste and gender, held that the study of caste inequalities would be illuminated by gender.

Different axes of social power, such as gender, economic class, ethnicity and caste often operate simultaneously with significant interactions with each other (Mukhopadhyay 2015). Crenshaw (1989) coined the term 'intersectionality' to capture these interactions expressed in multifaceted discriminations associated with gender and race. The concept of intersectionality can be extended beyond gender and race to include any group identity such as caste and class in my case.

According to Deshpande (2002), the intersection of caste and gender in India suggests that those who are disadvantaged according to both identities, namely, low-caste women, bear the brunt of the burden of disadvantage. A growing body of literature has addressed the issue of intersectionality using qualitative methods. These studies highlight different axes of social power that are interrelated, that intersect and mutually reinforce each other (Collins, 1991; Glenn, 1999; Greene, 1997; Östlin, 2002; Whittle and Inhorn, 2001).

Iyer et al. (2008) study of intersectionality of gender and class in determining health outcomes shows how a single dimension of outcomes is altered when considering intersecting processes. Similarly, Ramachandran's (2004) study of the District Primary Education Programme in India shows that the decline in access, infrastructure, functionality and quality of primary schooling is governed by gender, caste and class. Girls, especially from socially deprived groups are the ones left out of the primary education facilities.

Velaskar (2016) treats gender, caste and class relations of power as deeply interrelated and inextricably entwined (and overlapping) axes of difference, inequality, domination and power manifested in the social organization. Agarwal (1997) also finds in a multi-caste, class-heterogeneous village (in India) gender relations are revealed not only in division of labor and resources between men and women but through their interaction with other structures of social hierarchy like caste and class.

In the context of peasant resistance in Indonesia, Hart (1991) argues, that it is not possible to study the dynamics of class—and, I would add, caste processes—without a gendered analysis. In the Indian context, both caste and class construct gender, and gender constructs both class and caste. I analyze how the three axes play up differently in different contexts, thereby emphasizing the heterogeneity that brings up differential access to PDS and the variation in experiences around it. While some of the elements of these identities in the

context of PDS are suitably addressed by quantitative data, for others I rely on qualitative surveys for analyzing in depth information.

In the analysis of quantitative data, when I refer to “gender”, I mean the female headed households (FHH). FHH experience with the PDS is the most basic and direct way in which gender comes to the fore. Though marital dissolution like death of spouse, divorce, separation or desertion are the most common reasons why women become heads of households, there has been an increase in other causes leading to woman becoming the head of the household. These include migration, agricultural practices (absentee landlordism), landholding patterns and patron-client relationships along with population growth that have contributed to the growing numbers of women-headed households (Quisumbing et al. 1995; Chant 1997, 2001; Chant 2003; Kabeer 2003; BRIDGE 2001; Budowski et al. 2002; Marcoux 1997; Moghadam, 1997). In Bihar and UP in particular, male migration to cities has become a prominent factor in households being headed by women.

According to Srinivas (1962, pp. 3) caste is defined as “a hereditary, endogamous, usually localized group, having a traditional association with an occupation, and a particular position in the local hierarchy of castes. Relations between castes are governed, among other things, by the concepts of pollution and purity, and generally, maximum commensality occurs within the caste”. He further explains that “a caste is usually segmented into several sub-castes and each sub-caste is endogamous. This segmentation is probably the result of a long historical process in which groups continually fission off. Because of this long process of development there has come into existence several cognate groups, usually found scattered over a limited geographical region”.

Conceptually, caste operates at multiple levels of society, from pan-societal to region to village. The term also refers to units of caste (*jati*) as well as to sub-sub castes (like clan or *gotra*). Here I will refer to caste (*jati*) as the more generalized social group of hierarchies. Scheduled Caste and Scheduled Tribes are traditionally the disadvantaged social groups in India, and they continue to be oppressed (Borooah 2008; Gaiha et al. 2008; Gang et al. 2008).

In terms of caste, access to public goods, land ownership in rural areas, and basic infrastructure for socially marginalized communities are limited (Kijima 2006; Mutatkar 2005). With regards to OBC, there is evidence to suggest that, at the village level,

administrative units are dominated by the OBCs. This has given rise to the notion of a “powerful OBC section having overtaken the upper castes,” or OBCs as the new elite” (Deshpande 2007, pp. 740). “This belief has two consequences. First, this leads to a corollary assumption, namely, that this increased political influence must have translated into increased economic might. This formulation could mean that the gap between OBC and upper-caste is either closing or even reversed” (ibid). This would trickle down to the level of accessing PDS and the services offered therein. In the empirical analysis using caste dummies I use OBC as the benchmark.

4.2 Social Relations in the context of a safety net programme such as the PDS

The rights, entitlements, access to resources all are determined by position of people in the structure and hierarchy of their society (Kabeer 1994). Unequal social relations based on gender or social identity, dictate relations to resources, claims and responsibilities. This for example is more pronounced in terms of the caste structure, with women being at the lower helm of affairs even within the caste ladder, which becomes more complex when interacted with class. This results in unequal power relations in the bargaining processes particularly between the rights-holders and the service providers in accessing their entitlements.

Along the lines of Kabeer (1994), I systematically examine the relations of the intended rights-holders with the PDS dealers, with social networks within a village, with local government (in *panchayats* i.e. a cluster of five villages), community structures, and the state functionaries that delimit the boundaries of class and local power relations as well.

From the perspective of accessing PDS, both eligibility and entitlement are contested within the power structure of the local community. The social identity of the claimant, and the ability to build a relationship with the local leaders, the dealers in the FPS act as key routes to access. The precedence of informal rules at the stage of implementation of safety net programmes reproduce the existing social and economic power structures. As a result, the welfare rights of individuals and households are affected by the competing forces among the non-state actors. These non-state actors, through their network, have the potential to further

weaken the administration and affect fair (as mandated) allocation of welfare benefits such as in the PDS.

PDS can be an important tool for increasing wellbeing for poor and vulnerable in multiple ways. Apart from ensuring minimum food (calories) to all citizens, it bears on the multiplicity of tasks performed primarily by women within households, such as having to go to distant markets to buy food, alongside food processing and preparation. At the same time, poor delivery threatens wellbeing particularly for women. Low quality grains add to women's work burdens (clean, sort and cook the often substandard PDS rice), and care tasks (looking after sick children).

The social construct of gender, and its interactions with caste and class, shape women's bargaining power not only within the household but also in the interlinked institutional areas of the market, the community and the state (Agarwal 1997, Kabeer 1994), I try to highlight the contradictions and injustices that need to be overcome in accessing entitlements. I seek to capture this complexity of relationships entailing labor time and social interactions in relation to the PDS.

4.3 Leveraging entitlements in the three states of Bihar, Odisha and Eastern Uttar Pradesh

The three states offer significant variation in the functioning of the PDS and offer contrasting experiences. In the three states, after the introduction of the Targeted Public Distribution System (TPDS) and National Food Security Act (NFSA), substantive changes have taken place in terms of eligibility, entitlement and delivery mechanisms.

As discussed in the chapter 3, I conducted my surveys in different months beginning February 2016 and collected detailed data on different facets of the households in terms of their characteristics, their consumption patterns and their engagement with the PDS. Specifically, for this analysis, survey provides information on the purchases of rice and wheat and issues of access to PDS in the existing state. The data collected is stratified based on caste, gender and location.

In my sample for quantitative survey data, slightly over 30 percent households are female headed. The highest share is in Bihar at 35 percent, followed by UP at 26 percent (Chapter 3, section 3.5, table 3). It is lowest in Odisha sample at 17 percent. This pattern broadly represents the comparatively high incidence of male outmigration in Bihar and Uttar Pradesh.

4.3.1 Eligibility for services

With significant heterogeneity in terms of the dependence on the PDS, I examine here who avails of the benefits. One of the most basic determinants of access to PDS is if any household member has access to a ration card i.e. entitled to food subsidy. Nearly 100 percent in Odisha have the NFSA PDS ration card, followed by 99 percent in Bihar. In Eastern UP however the proportion of respondents who reported having a ration card is below the two states of Odisha and Bihar and stands at 51 percent mainly due to transition to the new NFSA card.

Access to ration card signifies several things. On the one side it captures the demand side i.e. propensity to demand PDS grains. It also can present the institutional quality in delivery systems. Moreover, it can signify the lack of access because of social, economic or political factors. Note that having a ration card is a necessary but not a sufficient condition determining access. With the institutional changes regarding eligibility under TPDS and now NFSA, access to the type of card, NFSA, BPL is an important factor in access. I control for the type of card in the empirical analysis throughout to capture this determinant of access.

In addition, in Odisha around 97 percent respondents reported that they have a bank account, almost an equal proportion (97 percent) in UP but in Bihar it is just about 79 percent. By looking at participation in different programmes we can look at the levels of engagement with the public programmes. In my empirical analysis, I use different markers for access, namely quantity of grains and accessibility to markets.

4.3.2 Markers of access

4.3.2.1 Quantity of grains

I first examine the quantity availed of rice and wheat separately³⁷. With cross-sectional data, I use a rich set of controls to minimize the omitted variable bias (see table 9a for the control variables). I ran regression models starting with the variables of interest like FHH, caste, followed by class. To look at issues of intersectionality, I include interaction of FHH with caste and class respectively; followed by just class and caste and then FHH with both caste and class. In one specification, I also control for village level unobserved factors by including village fixed effects (Table 9).

The regressand is the quantity of rice from the PDS that is obtained by a household i in village v . The main variables of interest are the gender (female headed household-FHH), Social Identity (SI) and class identity (CI) indicators. β_v denotes the village fixed effects.

$$y_{iv} = \alpha + \beta_v + \gamma X_{iv} + \rho * FHH + \delta * SI_{iv} + \tau * CI_{iv} + \varepsilon_{iv} \quad (1)$$

Table 9 presents the results for rice and table 10 for wheat (for table 10, see annex 5), first the parsimonious model with main variables of interest followed by full set of controls in tables 9a and 10a respectively. In this regression it is important to control for varying entitlements for which I include nature of card held i.e. AAY card or NFSA card.

The results in table 9 show that without controls, if anything based on gender and caste identity there is entitlement fetching. Yet, these are associations that seem to be village specific and tend to become weak or vanish once village fixed effects are introduced in the regression.

³⁷ For wheat results see Annex 5

Table 9: Determinants of rice quantities obtained from the PDS: Parsimonious model

	Variables	Only FHH	Only Caste	Only Class	FHH & Caste	FHH & Class	Caste & Class	FHH, Caste & Class	FHH Caste, Class, Village effect
Gender	FHH (1=yes, 0=No)	0.73 (0.44)			1.10** (0.45)	0.209 (0.44)		0.57 (0.44)	0.82* (0.41)
Caste	Caste: Base = OBC								
	SC (Yes=1, No=0)		1.58*** (0.54)		1.74*** (0.54)		1.40*** (0.53)	1.49*** (0.53)	0.30 (0.69)
	ST (Yes=1, No=0)		1.63*** (0.523)		1.79*** (0.52)		1.71*** (0.51)	1.79*** (0.51)	0.20 (1.28)
	Minority		-0.60 (1.44)		-1.01 (1.45)		-1.27 (1.41)	-1.46 (1.42)	-3.97** (1.83)
	General		-0.22 (0.80)		-0.23 (0.80)		0.18 (0.78)	0.17 (0.78)	0.18 (0.66)
Class	Land size			-0.01 (0.05)		-0.01 (0.05)	0.02 (0.05)	0.02 (0.05)	0.04 (0.09)
	Average non-food expenditure)			-0.006*** (0.001)		-0.006*** (0.001)	-0.006*** (0.001)	-0.006*** (0.001)	-0.007*** (0.001)
	Constant	16.6*** (0.247)	16.16*** (0.301)	20.15*** (0.430)	15.766*** (0.342)	20.06*** (0.468)	19.41*** (0.489)	19.13*** (0.534)	18.0*** (0.532)
	Village Fixed Effect	No	No	No	No	No	No	No	Yes
	Obs	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,380
	R-squared	0.002	0.012	0.055	0.016	0.055	0.066	0.067	0.192

Table 9a: Quantity of rice obtained from PDS

	Without village fixed effects	With village fixed effect
Female headed household (1==yes, 0==No)	-0.478 (0.6)	-0.182 (0.5)
Number of months in a year that got PDS rice	0.71* (0.4)	0.60 (0.3)
Number of months in a year that got PDS Wheat	-0.6*** (0.19)	-0.214 (0.2)
Is FPS located in your village-(Yes=1, No=0)	-0.89 (0.7)	2.079** (0.8)
Does the ration shop owner have electronic balance for weighing? (1=yes, 0=no)	-0.226 (0.7)	-1.989* (1.0)
Illiterate (Yes=1, No=0)	-0.73* (0.3)	-0.455 (0.4)
AAY card holder (Yes=1, No=0)	9.1*** (1.2)	7.23*** (1.3)
NFS card holder (Yes=1, No=0)	2.0** (0.9)	-3.4** (1.6)
Do you know what commodities are to be sold and what quantities by a FPS	0.61 (0.4)	0.249 (0.5)
Do you know price of the commodities to be sold by a FPS owner to you every month	2.*** (0.6)	1.5** (0.5)
Actual Land holding size (in Acre)	0.1* (0.06)	0.1** (0.056)
Do government functionaries inspect PDS functioning? (1=yes if 0=No, subjectively assessed)	-2.7*** (0.6)	-3.405*** (0.6)
Paddy Own Production quantity (in Kg)	-0.07*** (0.02)	-0.062** (0.025)
Monthly non-food expenditure on average (in rupees)	-0.0003*** (0.00001)	-0.0003*** (0.000001)
How many people currently live in this household?	1.9*** (0.1)	2.017*** (0.2)
Village Fixed Effect	No	Yes
Constant	2.964 (2.5)	2.758 (3.3)
Other controls – Age, social identity, intersection of caste and gender, information about quantity and price in the PDS, perceptions about fairness in the PDS, expressed grievance, homophily		
Number of Observations	923	923

In the regressions first, I wanted to see if there is differentiation based on gender where I use a specific variable for gender i.e. female headed household. In case of FHH there is no significant difference in terms of quantity drawn (in per capita terms) from PDS after controlling for other factors. The same is the case for caste. From the quantitative survey data there is no distinct intersectionality that is evident. Do these coefficients indicate an evidence of lack of significant identity-based discrimination? They do represent that there may not be significant association between the identities and the quantity of rice accruing from the PDS. Yet, they also indicate the need for further exploration of the issue.

First, gender-based discrimination or differentiation need not be confined to the case of female headed households. The true gender effect in accessing PDS can only be captured through an in-depth analysis using qualitative data where the pathways for differentiation and the family and community structures can be properly accounted for. Further, the discrimination need not be confined to quantity accrued. Prices, quality of grains, timeliness in service and lack of respect are other ways in which the women and lower caste individuals and households can face discrimination.

Also, it is possible that caste per se could put some households at a disadvantage but through a shared caste with people in decision making or in implementation, the negative effects could be mitigated. Thus, I also look at outcome for households who share the same caste group as the PDS dealer. My field observations suggest that homophily with the dealer defined at the caste group level might not capture the full reality. However, qualitative analysis below which explores homophily with sub-caste still shows it to be ineffective because incentives are so aligned that the benefit of favoring someone from own caste is outweighed by the economic gain that the dealer can make by siphoning off the grains to the open market (the arbitrage opportunities)

In terms of class and local power relations, I have relied on two measures of class: i) Landholding, ii) Per capita non-food expenditure as a proxy for standard of living. Landholding for example, which is generally used as a proxy for income/wealth, though partly reflects the income effect, but in India, especially in a rural setting where land plays a central role, it is also a source of local economic, social and political power.

One element of local elitism in Indian rural setting is associated with landholding that can easily skew the economic, social and political environment in their favor. For landowners, land is not just a source of income, but is also associated with greater power relations in relation to the landless. Landowners could use their land not only as a source of their own employment, but also lend the option of employing agricultural laborers, an asset that they can sell off for cash or use for borrowing, if need be. Landless on the other hand, work as agricultural laborers, or indulge in petty non-farm activities, or work for others, and in that context, they are comparatively powerless, subjected to low income, low decision-making power, and the associated low social economic status. Owning a land or not does lead to a class hierarchy.

Similarly, class is also related to wealth (which could be durable assets, or wealth like land, or livestock). State of being wealthier in an Indian rural environment corresponds to class and is not just restricted to income. Quantitatively, however, not all wealth data can be captured. One of the good proxies for wealth data is non-food expenditure. Households who have higher non-food expenditure generally tend to be wealthier. Power and wealth are important in a rural setting

Results in table 9 show landholding (measure of power) being clearly associated with greater uptake of rice from the PDS. Greater landholding is also likely to be associated with greater own production (variable-Paddy Own Production quantity (in kg)) which I control for in regressions in equation 1. Incidentally, rice is dearer of the two grains with or without NFSA.

In terms of per capita non-food expenditure expectedly it is associated with lower purchase of PDS rice. This is likely because higher non-food expenditure indicates better off households. Greater stakes in the PDS translates into bigger households obtaining more paddy from the PDS. Expectedly, those households that have greater own production seem to draw smaller quantities from the PDS. The main aim of the PDS is to increase household's uptake up to the entitlement level. Several factors on the supply side including the allotment and selection mechanisms seem to matter (with the possession of the right card). Several demand-side factors have significant effects, for example, the results suggest that the rights-

holders belonging to the richer households tend to get less grains probably because they strive less to get their entitlements.

While the rich can use their own resources to meet the shortfall in the PDS, own savings, the poor have no option but to try all means and attempt to secure their PDS entitlements. Greater household size also is a demand side factor with a unit increase in household size associated with higher drawing from PDS of 2 kilograms or more. Importantly, informed consumers draw more quantity of paddy from the PDS. In terms of land sizes there are two effects. Greater land sizes reflect class and economic power that leads to more uptake. At the same time greater own production implies smaller need for PDS grains.

One of the issues that underline entitlement snatching is lack of information. I control for several information related variables too (see the survey questionnaire in annex 4). The information questions related to knowledge about price and quantity mandated in the PDS.

The discussion above shows that a wide range of demand and supply-side factors can shape rights-holders experience of the PDS. I should point out that no causal inference can be made from these given the nature of the data, but it does provide important suggestive correlations. Inter alia, these include association between quantity of grains or prices paid and the different delivery mechanisms. In my analysis I have different categories of rights-holders in terms of how they met the criteria for eligibility.

4.3.2.2 Accessibility to entitlement of grains

The results presented in table 9a and 10a (for 10a results see Annex 5) include village level variables and as expected, rights-holders who belong to villages that are very far from market get more quantities from the PDS. Also, there is less uptake in villages that have more social differentiation.

Results on wheat in table 10 (Annex 5) are quite like the ones for rice in table 9. Again, there are no gender or caste effects including that of their interaction. One striking finding from these regressions which is reinforced by qualitative analysis is how inspections are ineffective and if anything, seem to be counterproductive. Qualitative analysis shows that

those dealers who are inspected are emboldened and they are more confident in malpractice. In case of wheat from the PDS shops that have been inspected, the quantity drawn is lower. Results on both rice and wheat are qualitatively similar in regressions with dependent variable being rice or wheat uptake from PDS for the households in per capita terms.

Again, one important feature of the regression results is the existence of many significant village fixed effects that can account for unobserved village level location factors. The heterogeneity is quite stark with villages in Odisha doing better than the rest in terms of the uptake. Village B1 in Bihar is the omitted village in the fixed effects.

4.4 Entitlement fetching and snatching

Perhaps even after controlling for other factors, quantity drawn from the PDS may not be the right indicator of access. Entitlements vary by household characteristics, their classification and other factors such as location. Odisha for example entitles both priority as well as AAY households to a price of rupee 1/kg of food grains.

The other measure of access that I look at is the gap between allotment and entitlement of food grains provided in PDS. How much less than the due entitlement, the household gets is the metric. Given the differentiators discussed above, I expect gender, caste and class or power would reflect in the access to PDS as well as quality of access.

How the net effect turns out to be is a function of entitlement snatching versus fetching (see Chakrabarti et al. 2016). Entitlement snatching is the act of PDS dealers providing quantities below entitlement. On the other side, Dreze and Sen (2013) propose the opposite effect of entitlement fetching where the very low prices in the PDS induce households to vie for their rights and get as close to entitlement as possible. This motivates me to look at the entitlement to allotment wedge as the outcome variable.

Looking at this issue requires important modifications. Entitlements in the laws and acts are not defined by grain but in the aggregate. Law simply states that for the specific type of household entitlement of food grains is 5 kg per person for PHH category and 35 kg per household for AAY households and there is some liberty in principle for the household to

choose their subjectively optimal mix. Hence, it is not practical to look at rice and wheat separately, but entitlements as well as drawing from PDS would be defined as a combination of rice and wheat. In getting the actual entitlement there had to be careful matching with the card status as well as location.

Apart from the quantity wedge there can be differences in prices as well. Generally, prices are uniform for all households (even though they are generally higher than the level mandated by the government). Hence, there is little variation to base analysis on. Yet, in a modified marker of price that I call effective price i.e. price weighted by the entitlement to allotment ratio there emerge significant differences. The idea behind this marker of price is that those who have greater fraction of their entitlement snatched, in effect face a higher price.

These quantitative measures of access however do not present the full picture. There are at least two more nodes in access that are important, and they are captured in detail in the qualitative analysis. First relates to the quality of grains. Field observations show differentiation in terms of indicators such as price and quantity, but these are not significantly different across rights-holders. Quality of grains is often used as an instrument because it is less explicit and imperfectly observed. Favoring someone by providing better quality is sometimes easier for the dealers. Thus, viewed in a broader perspective, entitlement snatching is not just restricted to the traditional markers of access i.e lower quantity and higher price of grains, but also nuanced measures such as the inferior quality of the grains provided, and the type of grains provided for. When rights holders who ideally are entitled to something edible, and a utilizable product, not having access to that amounts to entitlement snatching. Similarly, when preference for a particular variety of grain in accordance with the local taste and culture is not honoured, it could be treated as entitlement snatching. In my thesis, I take the case of Bihar and Odisha to illustrate my points (see section 7.2.1.1 where I discuss in detail the preference based on variety and quality of the disbursed grains), which I emphasize amounts to entitlement snatching.

Similarly, the quality of services is another tool where experiences based on caste, class or gender could differ significantly. The quality of services becomes an important factor in access from the beginning itself while getting the right card and getting registered in the PDS shop of their choice. The qualitative analysis provides in depth perspective on different

markers of access i.e. in terms of quantities being lower or prices being higher but also in terms of comparatively intangible ones like quality of grains and the nature of services while accessing PDS.

Ribot and Peluso (2003) note that some people and institutions control resource access while others must maintain their access through those who have control. This is a primary difference between analyses of access and property that Ribot and Peluso (2003) point out. The type of access that PDS relates to is rights-based access (that which is sanctioned by law, custom or convention).³⁸ Also, access relations keep changing, depending on an individual's or group's position and power within various social relationships. Different political-economic circumstances also change the terms of access. The ability to benefit from access is mediated by constraints established by the specific political-economic and cultural frames within which access is sought, the so-called access qualifications in Blaikie (1985). Blaikie (1985) defines access qualifications as entry costs into programmes based on both economic criteria but also noneconomic criteria such as kinship, patronage, location or membership social groups.

³⁸ Rights-based means of access imply the involvement of a community, state, or government that will enforce a claim.

Table 11: Entitlement snatching in rice and wheat

Female headed household (1==yes, 0==No)	0.513	0.389
	(0.853)	(0.902)
Schedule caste (Yes=1, No=0)	-1.273	-0.387
	(0.9)	(0.9)
Schedule tribe (Yes=1, No=0)	-1.983*	-0.92
	(1.053)	(1.062)
General caste (Yes=1, No=0)	-1.2	-2.104**
	(0.819)	(0.85)
Number of months in a year that got PDS Wheat	-0.276**	-0.711***
	(0.133)	(0.248)
Is FPS located in your Village (Yes=1, No=0)	0.705	-2.403*
	(0.964)	(1.213)
Does the FPS have electronic balance	1.019	2.460**
	(0.736)	(1.054)
AAY card holder (Yes=1, No=0)	-4.125**	-3.532*
	(1.563)	(1.867)
NFS card holder (Yes=1, No=0)	-2.829**	-1.357
	(1.167)	(1.965)
Dealer homophily	-0.061	-0.415
	(0.532)	(0.529)
Informed about right price and quantity	-1.755**	-1.381
	(1.323)	(1.318)
Actual Land holding size (in Acre)	-0.190***	-0.177***
	(0.069)	(0.059)
Government functionaries inspect PDS?	2.959***	3.438***
	(0.692)	(0.766)
Paddy Own Production quantity (in Kg)	0.104***	0.104***
	(0.028)	(0.029)
Paddy Market quantity	0.054**	0.052**
	(0.02)	(0.023)
Monthly non-food expenditure on average (in rupees)	0.0003***	0.0003***
	(0)	(0)
Household size	1.122***	1.068***
	(0.165)	(0.206)
Village Fixed Effect	No	Yes
Constant	3.616	3.743
	2.599	3.98
Number of Observations	929	929

Standard errors clustered at village level. The entitlements are only for aggregate grains and not rice and wheat separately hence the regression is on the combined.

Table 11 presents results after recasting the problem as one of entitlement snatching. There is no gender effect in terms of FHH being subjected to more snatching. The dependent

variable now is the gap between the entitlement and the quantity obtained by the beneficiary. Looking from this perspective results in Table 11 provide some new insights. With entitlement snatching as dependent variable there is clear evidence of upper caste households facing less of snatching. Interestingly I find similar association in case of scheduled tribe. Part of the reason is that maximum scheduled tribes in the sample are from Odisha, a comparatively well-functioning state for the PDS.

One of the important findings is along the lines of Thorat and Lee (2006) where there is more entitlement preservation if there is PDS shop located in the same village. If the PDS shop is in the same village there could be more familiarity and possibly social pressure to minimize leakages in case of village compatriots. Conditional on eligibility, much of the experience with the PDS and the performance of food delivery depends on the last node of delivery i.e. the Fair Price Shop (FPS).

While in Bihar 73 percent reported the availability of the FPS in their village, in Odisha and Eastern UP, nearly 99 percent and 85 percent respectively reported that FPS is not located in their village. This has an important bearing in terms of distance of FPS from their house. In both these states owing to the FPS being located at a distance, it is assumed that the men must primarily be getting the PDS ration. In case of FHH, this becomes a comparatively pertinent issue for access if FPS is located far away. Since in both the states there is a significant percentage whose primary source of income come from wage (particularly in Odisha where a significant 70 percent are wage labourers), it might have a bearing on their income too in terms of opportunity cost of the wage for the day to collect ration.

Further, the regression results show that AAY and NFSA card holders get a greater fraction of their entitlement. This is important because not all have the NFSA card and this non-possession of cards reflects in the amount of grains obtained. Qualitative analysis clearly picks control of access to cards as one of the levers of local power relations. Women and lower caste households often have greater difficulty in getting the right identification documents.

Following on the results above, class reflected in terms of landholding as well as non-food expenditure both are associated with less compromises in entitlement. When assessed in terms of amount of grains obtained, it is lower for such households but the level of snatching

itself is lower. The results also reaffirm the roles of both demand as well as supply side. Those with higher own production probably seek less from PDS because they have their own grains. Another very important and pertinent result relates to greater snatching being associated with household size. Bigger the household, the amount of food grains to be disbursed is greater, hence more scope for arbitrage by the dealer. In my field observations also, bigger families were often given less than what the act proposed. Larger families also tend to be poorer and had weaker bargaining power.

Table 11a presents as a test of robustness the snatching regressions expressed in percentage terms. Here, FHH are more likely to face reduced snatching. It is possible that there is more fetching. Relying on the full model indicators of class in terms of non-food expenditure, there is incidence of lower percentage snatching from those rights-holders who have a comparatively high standard of living.

Table 11a: Entitlement snatching in percentage terms

Dependent variable Percent Snatching i.e. (entitlement – allocation)*100/entitlement

VARIABLES	Only FHH	Only Caste	Only Class	FHH & Caste	FHH & Class	Caste & Class	FHH, Caste & Class	FHH Caste & Class with Village FE	Full Model	Full Model with Village Fixed Effect
FHH (1==yes, 0==No)	-1.5 (1.7)			-2.118 (1.7)	-3.006* (1.77)		-3.7** (1.79)	-4.3** (1.9)	-4.7** (2.1)	-4.3** (1.8)
SC (Yes=1, No=0)		-3.9* (2.1)		-4.26* (2.1)		-4.6** (2.1)	-5.2** (2.14)	-5.7* (3.0)	-0.689 (2.3)	1.216 (2.8)
Schedule tribe (Yes=1, No=0)		3.612 (2.6)		3.489 (2.6)		4.23 (2.5)	4.058 (2.5)	-7.153 (4.5)	-5.2* (3.1)	-6.239 (4.0)
Minority (Yes=1, No=0)		7.7 (5.9)		8.4 (5.9)		6.30 (5.8)	7.3 (5.8)	3.2 (8.0)	-5.2 (9.1)	-8.3 (13.4)
General (Yes=1, No=0)		-5.1* (2.9)		-5.1* (2.9)		-3.95 (2.9)	-3.868 (2.8)	-1.545 (2.8)	-0.171 (3.3)	0.112 (2.5)
Land holding size (in Acre)			-0.140 (0.2)		-0.147 (0.21)	-0.16 (0.2)	-0.184 (0.2)	0.105 (0.1)	-0.300 (0.2)	-0.163 (0.23)
Non-food expenditure			-0.014*** (0.003)		-0.015*** (0.003)	-0.014*** (0.003)	-0.015*** (0.003)	-0.02*** (0.004)	-0.008*** (0.003)	-0.009** (0.004)
Mukhiya dealer homophily									-1.211 (1.8)	-1.6 (4.6)
Government inspect PDS?									3.035 (2.08)	3.2 (2.0)
Paddy Own quantity (in Kg)									0.1** (0.07)	0.1* (0.09)
Village Fixed Effect	No	No	No	No	No	No	No	Yes	No	Yes
Observations	1,069	1,069	1,069	1,069	1,069	1,069	1,069	1,068	1,043	1,042
R-squared	0.001	0.011	0.021	0.012	0.024	0.03	0.036	0.121	0.303	0.375

4.4.1 Paradox of inspection, role of information and the PDS experience

The results show in some cases the seemingly paradoxical result of incidence of inspections being associated with greater snatching. The ones inspected probably feel more confident as there usually is no follow up. Awareness plays an important role in determining access and the quality of services. Further, those who know about the right quantity or price fare better. In my field observations it was striking in terms of how many respondents (proportionately more women and lower caste) were not aware about the mandated price or quantity the dealer was supposed to provide.

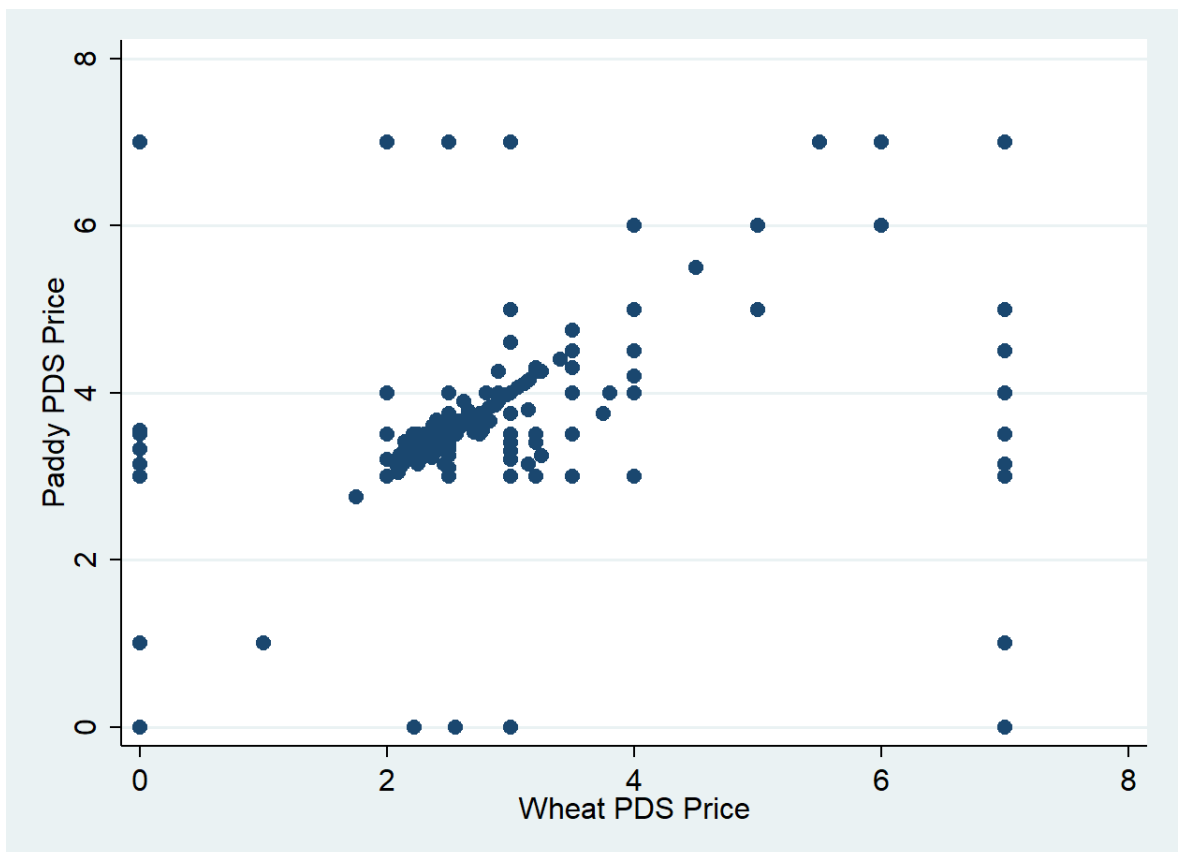
Lack of awareness about their entitlement and the issue price among rights-holders is another important differentiator. In Odisha one of the better performing states in comparison to UP and Bihar, 88 percent reported knowing what commodities are sold and in what quantities by a FPS owner, while 89 percent reported that they knew the price of the commodities sold, and that nearly 92 percent kept their ration card with themselves. However, in UP only 35 percent reported that they were aware of the type of commodities that were sold, and only about 5 percent reported that they were aware of the right price of the commodities, thereby a significant 95 percent were not aware of the prices of those commodities.

4.4.2 The price differentiation channel: Assessing the effective price

There are three nodes determining differential access and variation in quality of services within the PDS. First is quantity, second is price of the grains i.e. both rice and wheat (discussed above). Finally, there can be quality differences in the grains supplied to the households. Price and quantity, are observable. In contrast, quality is an attribute where special favours and distinctions can be more easily cloaked. In other words, if differentiation were executed based on price and quantity they would be easier to spot and can lead to opposition. Quality on the other hand seems a safer instrument to favour specific groups. In quantitative survey, it is difficult to capture the intricate nature of such instruments. I use qualitative analysis to gauge the issues relating to quality of disbursed commodities.

Through the field data collection, it became clear that though prices were higher than the government mandated for the two grains, there was no distinct discrimination across households. Generally, even if NFSA were already implemented, the dealers charge 1 rupee per kg extra in case of both rice and wheat. Hence wheat would be sold to households at 1 rupee higher than legal i.e. 3 rupees per kg for wheat and rice would be sold at 4 rupees per kg. There was comparatively limited variation across households. Charging 1-rupee higher price for both rice and wheat is generally the norm but it need not be uniform 1 rupee higher for all households. Some variations in the prices did exist (see figure 11). For example some households pay Rupees 2/kg for 20 kg of rice/wheat, while some else pay Rupees 3/kg for the same amount, while others pay Rupees 4/kg. Even with 1-rupee variation it translates into significant differences in values. Similarly suppose for the same price, households are getting different amounts, it amounts to a higher effective price for the households.

Figure 11: Price variations for rice and wheat across households in the sample



Should we then believe that there has been no price-based discrimination across gender, caste or class? To address this issue, I develop a new measure called effective price that is capable of engendering differences in prices based on how generous (to what degree) has

the system been to household in helping them meet their entitlement. I define the effective price as follows based on equation 2

$$Effective\ price_{ic} = \frac{Entitlement_{ic}}{allotment_{ic}} p_{ic} \quad (2)$$

Defined in this way, the effective price captures entitlement snatching. It is the weighted price where weight is the entitlement to allotment ratio. The prior for developing the concept of effective price was to supplement the concept of entitlement snatching with an alternate exposition, the rephrasing of the problem to highlight that aspect. Here, if allocation is high relative to entitlement, then effectively the beneficiary pays a smaller price. On the other hand, if it is low then the household must rely on open market and effectively face a higher price. In my sample there are no cases where allocation is zero while entitlements are not. That protects against limiting cases where the effective prices could turn out to be undefined. Note that the market prices are not available at the beneficiary level and a direct opportunity cost of entitlement snatching cannot be captured by valuing the grains at their market prices. Also, the prices reported vary at times and are not uniform across rights-holders.

In equation 2, $entitlement_{ic}$ represents the entitlement of household i for commodity c based on the category of household (APL, BPL or AAY) and $allotment_{ic}$ is the quantity accrued to household i for commodity c . In effect, equation 1 weighs the prices faced by the household by the degree to which entitlements are compromised. Alternatively, those whose greater fraction of the entitlements are not honoured, in effect pay a higher price. That is the motivation behind the idea of an effective price. Note that the entitlement is defined as a function of total food grains intake under the different regimes. Under NFSA the entitlement is 35 kg/month for AAY households and 5 kg per person for NFS card holder. The rules do not separately state the clause for rice and wheat.

Hence, I take the aggregate entitlement for rice and wheat in the numerator and add the allotments for rice and wheat that comprises the denominator. In an ideal situation, the ratio should be equal to 1, personal choice of not withdrawing the assigned quantity of grains notwithstanding. Note that Odisha has made the price for all grains for all households i.e. Priority Households under NFSA as well as AAY households eligible for getting their rations at rupees 1/kg. The quantity wise allotment remains as outlined in the NFSA.

If there were limiting cases where allocations were zero, one could flip the ratios to get an entitlement snatching. Snatching is measured as the ratio of the value of allocated and entitled grains. If rice and wheat PDS prices are respectively p_{ir} and p_{iw} (price of rice and wheat for household i) and correspondingly entitlements and allocations of rice (and wheat) to household i are E_{ir} (E_{iw}) and A_{ir} (A_{iw}). Then a simple measure of snatching for a household can be computed by:

$$\frac{\sum_{j=r,w} p_{ij} A_{ij}}{\sum_{j=r,w} p_{ij} E_{ij}} = \frac{p_{ir} A_{ir} + p_{iw} A_{iw}}{p_{ir} E_{ir} + p_{iw} E_{iw}} \quad \dots (3)$$

This is simply the value of allocated rice and wheat divided by entitlement of rice and wheat. Hence, it measures how much of their entitlement households capture through actual allocation.

Either because of higher prices charged or greater gap between entitlement and allotment, effective prices are higher in Bihar and UP than in Odisha. Given the base prices that are higher for rice, the effective prices are also higher for rice in all states if the level of snatching were the same. Figure 12 generally shows higher effective price for rice except in Odisha. In case of rice as well as wheat, FHH's effective price is comparatively high (Figures 13, 14). Across social groups, the small number of scheduled tribes in Bihar who are there face a high effective price. There is no pecking order in case of wheat but in rice the lowest effective price faced is by the general caste in Bihar as well as in UP. In UP in particular, the effective price faced by the general caste is just 2.96 per kg compared to 4.25 per kg for the scheduled caste. The difference in case of Bihar is comparatively small with general caste paying only 40 *paise* less per kg.

Figure 12: Effective prices of rice and wheat across states

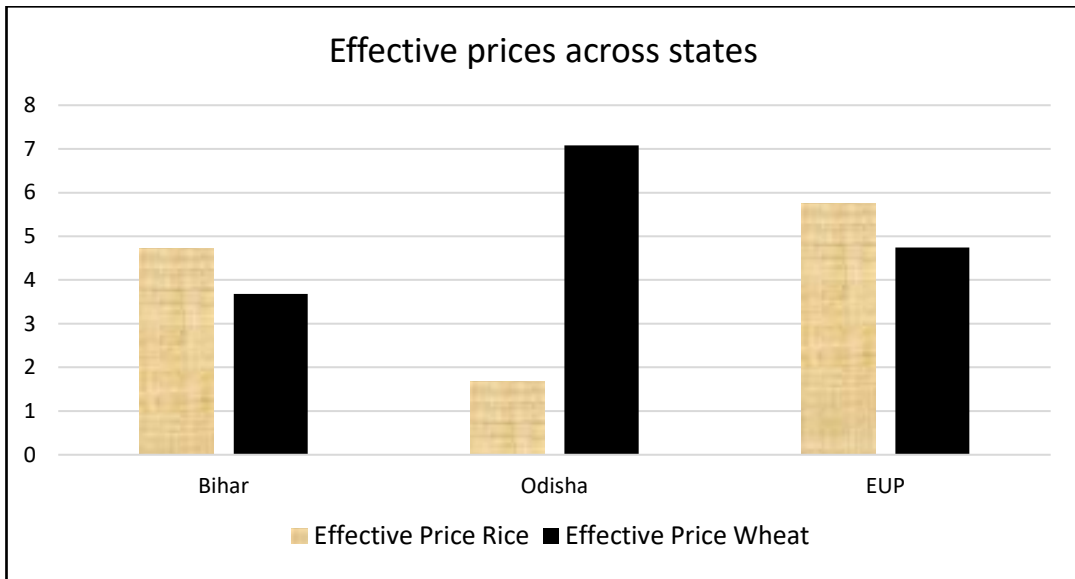


Figure 13: Gender wise variation in effective price of rice

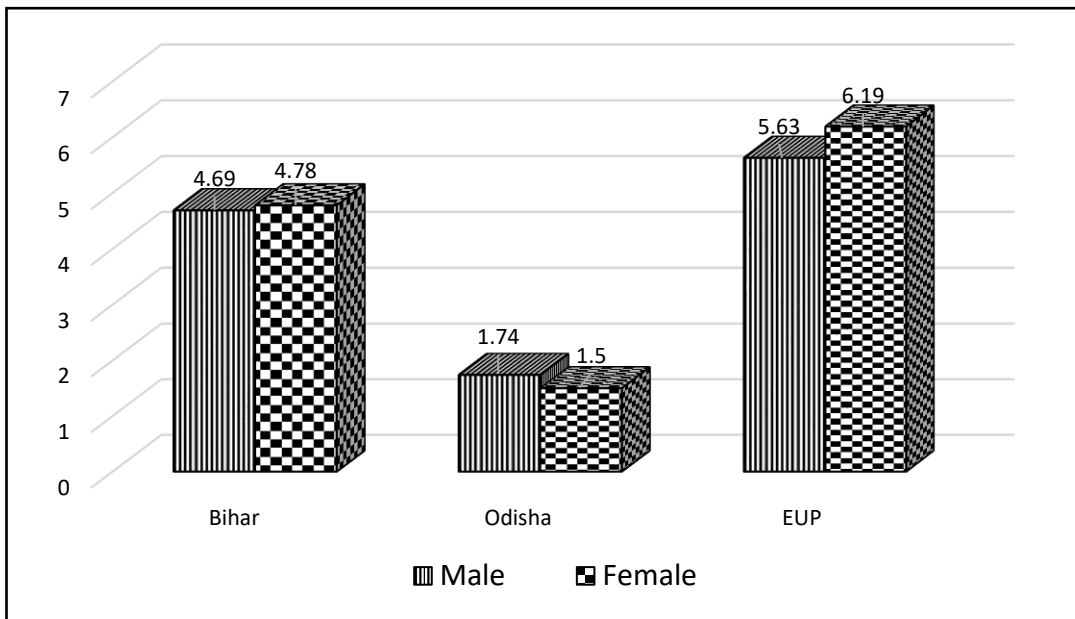


Figure 14: Gender wise variation in effective price of wheat

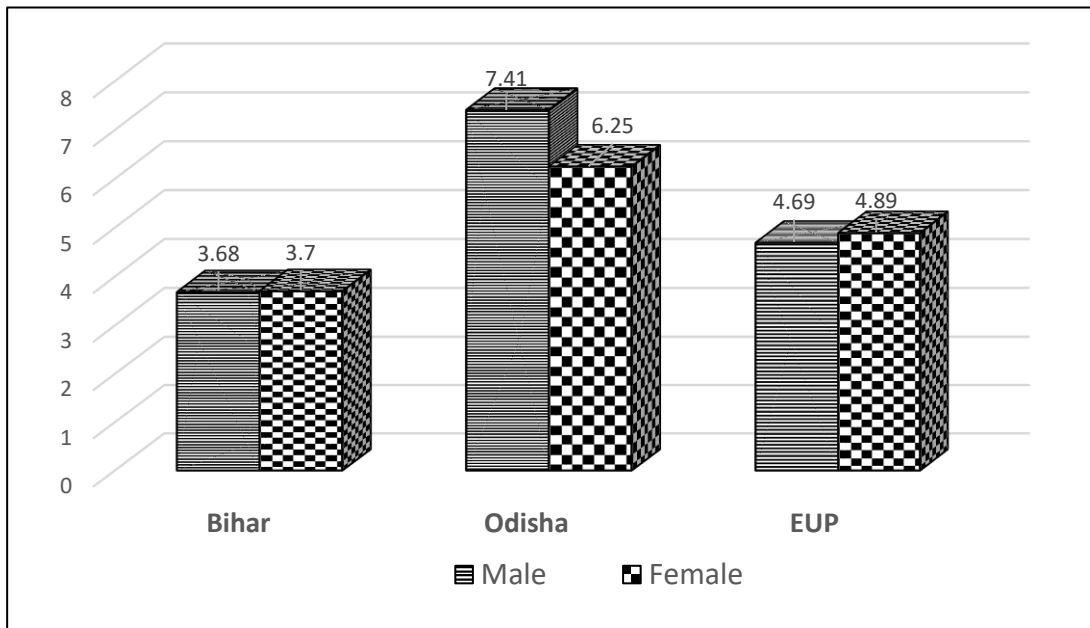


Table 12 (below) presents the results of the regression of effective price of rice and wheat with village fixed effects. First there is evidence of intersectionality here - scheduled caste women face a higher effective price for wheat even after controlling for village level factors. Also, general caste households face a lower effective price in rice. As in other regressions, there is evidence for entitlement fetching. Those households which draw more frequently from the PDS also tend to face lower effective price. Cardholding again has a mitigating effect with effective price lower. This again relates to the fact that if having the right card gives leverage then it can be the lever to discriminate against women, lower caste and economically less powerful (for example landless or lower land holding size).

There are two further **points** that are important. First being aware about prices helps the PDS user. Results in table 12 show effective prices are lower for ones more informed. Moreover, FPS in the same village has a benign effect in terms of lower effective prices for rice and wheat. With the suggestive findings from the quantitative study, I next use the qualitative study to validate the results as well as to complement by addressing issues that could not be captured above.

Table 12: Determinants of effective price

	With village fixed effect effective price of rice	With village fixed effect- effective price wheat
Female headed household	-0.248 (0.189)	0.146 (0.26)
General caste (Yes=1, No=0)	-0.728** (0.319)	-0.346 (0.308)
Number of months that got PDS rice	-0.109 (0.107)	0.488** (0.204)
Number of months that got PDS Wheat	-0.190** (0.085)	-0.768*** (0.192)
Is FPS located in your Village	-1.126** (0.49)	-1.213* (0.69)
Does the ration shop owner have electronic balance for weighing?	0.754*** (0.236)	-0.104 (0.786)
AAY card holder (Yes=1, No=0)	-1.225*** (0.371)	-0.925* (0.498)
NFS card holder (Yes=1, No=0)	-0.662 (0.405)	-1.021* (0.533)
Know right PDS price	-0.525*** (0.174)	-0.513* (0.293)
FHH x SC	0.384 (0.312)	0.607* (0.339)
Mukhiya and dealer same caste	0.125 (0.168)	0.092 (0.716)
Government functionaries inspect PDS?	0.805*** (0.193)	0.731 (0.489)
Paddy/wheat own production (in Kg)	0.037*** (0.012)	0.02 (0.013)
Paddy/wheat Market quantity	0.018*** (0.004)	0.007 (0.009)
Monthly non-food expenditure	0.000*** (0.0000001)	0 (0.00)
Village Fixed Effect	Yes	Yes
Constant	6.212*** 1.328	6.411*** 1.636
Number of Observations	923	775
Other variables—FHH x caste, Age, Express grievance, homophily dealer, household size, literacy (standard errors clustered at village level)		

4.5 The workings of power: insights from the qualitative data

The quantitative results show positive association with access to NFSA card and entitlement being near to allotment. In this section, drawing select examples from the villages of Bihar, Odisha and Uttar Pradesh, I examine, how even access to ones' ration card is mediated by the local power relations in a village, especially in case of a woman and this can be aggravated with caste and class status. The nature of odds faced by concerned households would ultimately determine the level and quality of access to the PDS.

4.5.1 Local power politics

The regression results (Table 9, 9a, 12) point to the existence of significant village level factors affecting access outcomes. Village level heterogeneity, including in gender relations, underscores the need for customized local solutions if food entitlements for example must be gender just. The interplay of caste, gender and class, alongside local politics and power relations, was clearly illustrated by the case of village B2 in Patna district (for village profiles see Chapter 3, section 3.8). This village is unique as there were de facto two *Mukhiyas* (headman): one incumbent *Mukhiya* (upper caste *Bhumiyaar*) who had been in this position for many years, and the other a proxy *Mukhiya* (of lower caste). The second was elected when the position was reserved for an SC candidate.³⁹ Having served as a bonded labourer in the upper caste *Mukhiya*'s house, he had no real power. His wife and daughter too were engaged in the service of the *Bhumiyaar* (former) *Mukhiya*'s house.

Low caste households then did not draw any benefit from homophily with the *Mukhiya*, even though the *Bhumiyaars* are a minority in the village, the majority being from the SC and OBC category.⁴⁰ Despite the low numbers, the upper castes continued to wield power,

³⁹ The 73rd and 74th Constitutional Amendments, 1992, ensured 33 percent reservation for women, SCs and STs at all three tiers of local government, from the village panchayat to the district.

⁴⁰The prior is that based on the concept of homophily, if the caste of the dealer is same as the caste of the beneficiary, there would be greater uptake in PDS. However, results seem to indicate that homophily does not play a role. Given the deeply entrenched caste system in India, this might seem surprising. Qualitative analysis shows that if commission for dealers remain low the incentives to divert grains remain high. The counterexample for this is Chhattisgarh where the commission of the PDS dealer was raised manifold and resulted in reduced leakages (Krishnamurthy et al. 2014). Further the impact of homophily occurs at a more

manifested in the way that ration cards were used as a tool to garner votes during the election. An SC woman whose husband is a car driver in Patna (nearby city), was denied the ration card, she believes, because of her allegiance to the opposing upper caste *Bhumiyaar* household, who had contested and lost the *Mukhiya* election. With no work, she now helps in this household with domestic chores like washing, cleaning, and other menial jobs with a hope that whenever the man of this household wins the *Mukhiya* election, he will favour her. She complained that while she was denied the card, others, the “landed people” comprising mainly the upper caste *Bhumiyaars* have a card.

Another case in point is that of 75-year-old Bharti Devi (SC)⁴¹. Having access to her ration card was a struggle for her. She does not get old age pension nor does she have a BPL card. Since her late husband was against the ruling upper caste *Mukhiya*, she was denied the ration card too. Even the ward members, and the *Mukhiya* himself accepted that they had purposefully cut off her name from the beneficiary list since her late husband was against their political faction.

As the village is divided into two factions, both led by *Bhumiyaars*, SC women maintained that the dealer belonging to their caste did not help them. Here, homophily by construction does not seem to matter as local politics and power relations play an overriding role. The main reason seems to be offsetting of economic incentives. Independent of caste, the dealers have the incentive aligned towards diverting grains and this overrides their utility from favouring someone from their own caste.

Any dealer, they allege, to continue in the dealership, must have the “blessings” of the upper caste *Mukhiya*. And this dealer is no different. They further added that, “Caste and gender of the dealer makes no difference. The *Mukhiya* rules the dealer. If the *Mukhiya* wants, even if you do not have a card, you will get the ration. He just needs to direct the dealer. He writes on a piece of paper and you can show that to the dealer, he will not deny you grains”. They

granular level i.e. sub caste and even clan (*gotra* level)-see Chapter 5, section 5.4. Moreover, the power relations in the village rule over limited effect that homophily could have. A lower caste dealer, notwithstanding the economic incentives often does not have enough discretionary power and might end up favouring the upper caste rights-holders instead.

⁴¹ All names have been anonymized to preserve confidentiality

also alleged that though the dealer does not overtly discriminate against them, during disbursement he is partial to the upper castes and those with effective contacts.

Earlier the present dealer's father was the one distributing the grains. The PDS shop was in the lower caste hamlet. But being an alcoholic, he was irregular in distributing the grains. This resulted in fights at the PDS shop, when upper castes, who considered it below their dignity to stand in a line in a lower caste hamlet would break the line and take their share, while the lower castes would be left jostling for theirs. Once, losing patience, the PDS dealer was physically assaulted by the lower castes. The *Mukhiya* then decided to move the PDS shop near his house and run it under his supervision. Since then, the son of the dealer, who is pursuing higher studies in the city, took over the dealership. He got the dealer license renewed, which was almost cancelled based on villagers' complaints. I was told that the *Bhumiyaar* (who lost the election) in fact orchestrated the whole episode, instigating the villagers of his faction to file a written complaint. This was to teach the ruling *Mukhiya*, who was the patron of the dealer, a lesson.

In Odisha, rights-holders from village O4 recounted their experiences around ration cards. The major issue in this village for example has been that many people have been left out from the 'beneficiary list', most of them being the ones who earlier had a BPL card. . Both Monitoring officer and the block officials accepted that there has been confusion about the selection criteria and that it was not done efficiently. They did not have clarity even on basic items as to what they should consider as *pucca* (cemented) house and which ones they should consider as *kaccha* (are made up of wood, mud, straw and dry leaves) house, characteristics that were used as proxy means for selection. During the time of the interview, they however said that they will go for a second round of survey.

This apart, several stories around the discrepancies in issuing cards were narrated from Odisha villages which added to the women's and lower caste's struggle with the PDS. Qualitative analysis clearly shows women to be more affected by the administrative problems of the PDS. For example, Kunti Devi (ST) in Odisha village who had availed of the IAY-house loan⁴² under *Indira Awas Yojana* a social welfare flagship programme,

⁴² The broad purpose of the scheme is to provide financial assistance to some of the weakest sections of society for them to upgrade or construct a house of respectable quality.

created by the Indian Government, to provide housing for the rural poor in India, was denied the ration card, since they had a house to themselves, though the house does not have a cemented roof. The house has cemented four walls, but a tin shed roofing.

Chuni Devi's (ST) name was cut off from the BPL category and was included in the APL category since her two sons were studying in a government college. For the last 5-6 years though she had approached the block official several times, nothing has been done till date. Another female respondent said that they have not been issued the NFSA card since her husband now is working as a helper in an automobile company and earning INR 6000 per month.

There are distinct differences in the experiences of caste- and gender-based inequity, even though both are outcomes of the same principles and these inequities converge in complex intersections, making disparities by caste and gender difficult to segregate (Joshi and Fawcett 2006)⁴³. Talking in the context of water policies, Joshi (2011; pp.57) notes that the simplistic interpretation and segregation of caste and gender in drinking water policies and strategies does little justice to the reality of a "complex gendered caste-based discrimination" in India. Similarly, in the context of PDS, the complexities as outlined above take different forms.

4.5.2 Less explicit sources of discrimination

While most commonly, the source of discrimination in the PDS has been thought to be in terms of quantity of grains or the level of prices, qualitative data in the three states show that these are not necessarily the levers of discrimination. Rather compromised access is reflected in the quality of the grains disbursed to different types of households as well as the quality of services provided in delivery.

⁴³ Besides their complaints for ration card, majority of the card holders seemed more concerned about their kerosene oil entitlement. As per the new NFSA card, the column for kerosene has been left vacant. Such omission shifts the power balance towards the dealer. The kerosene dealer who is from an upper caste (Brahmin) and has been distributing oil for the past 15 years in this village has been engaged in malpractices. Respondents said that invariably there would be fights with him for the right amount and the price he charged. With no column for kerosene oil, he distributes oil as per his choice. Being from the upper caste, his connections with block officials, had made him continue in this position for long.

Discrimination in terms of lower than entitled quantity and higher than mandated price is easier to spot and can be opposed. Also, with low prices under NFSA, a one rupee or more price goes unopposed. There are subtler and latent forms of differentiation due to comparatively imperfect observability. A consistent source of discrimination is in terms of quality. Almost all respondents complained about the bad quality of rice in Bihar. Though generically the quality of grains is subpar in the PDS, within that there is differentiation based on caste, gender and power. The elements of bad quality include bad odour, bad taste, bad colour, mixing with stones and other elements, at times insects are also found in the ration. Most respondents conferred that the allotted rice is inedible and that they are forced to ultimately buy from the market.

Across the three states, the major complaint for most rights-holders was that the dealer blends the good and bad quality rice together. This is despite their requests to give it separately. Back home women must work to sort and separate. Along with the household chores and care for children, this anomaly in the PDS resulted in women experiencing additional gender-specific demands on their time owing to bad quality of rations.

4.5.3. Poor delivery and the absence of redressal

While discussing the dealer's son in village B2, the women noted that though his behaviour is good, better than his father's, he is entirely controlled by the *Mukhiya*. *"He gives more to the upper castes, he gives them whatever they ask for. If we (women) protest, he says either take this or nothing at all"*, said some of them. The usual complaints related to quantity, quality and measurement issues, though they were content with his regularity. They must wait longer in line, for less quantity or inferior quality rice at a higher price.

The women knew that as the *Mukhiya* is well connected, nothing will change even if they complained. Most were scared to complain because the *Mukhiya* would threaten to strike off their names from the list of ration cardholders. One of them recounted a case where, when she complained, the next she knew her ration was withdrawn. Most of the SC women observed, *"if the dealer is of the same caste, they are more your enemy, as they exploit you even more. A Bhumiyaar dealer, however, will be no different, and the worst is we cannot*

say anything to the upper castes; at least with a lower caste we can fight". With such entrenched power relations, the prospects for gender justice are bleak.

What emerges is that the dealers let the upper castes choose the grains, give them an extra sack of grains if required, while amongst the lower castes, they favour those they view as potential trouble makers. As most of the women respondents said, "*aadmi chin chin ke deta hai*", (he will discreetly choose whom to please and whom not do); "*badka jaat ko jayeda deta hai*" (gives more to the upper caste people); "*jo cheez mangta hai, wahi de deta hai*" (whatever the upper caste will ask for he will oblige); "*jitna mangta hai, woh de deta hai*" (whatever quantity they would ask for he would oblige). Further, when the PDS shop is too crowded, the upper castes get priority and the SCs made to wait.

The PDS shop remains open only for a day, and the date of distribution is not fixed. "We come to know of it by word of mouth or when we see people going to the shop. During that time whoever comes gets the grain, if you miss that, you do not get it later", said an SC woman. Since the PDS shop is now located at *Mukhiya's* place, lower caste women do not fight there. When they leave the premises, they are very vocal in abusing the dealer, some of them added in jest.

In eastern Uttar Pradesh, in village UP1, the present *pradhan* (head of the village) (from SC) who was the dealer earlier, had a bad reputation of being corrupt, abusive and would get aggressive if people raised their voice against him. Women used to face the brunt of it in the form of vulgar abuses while with men he would get physical. Note the *pradhan* was from SC category while most of the villagers in this village belonged to OBC.

During his time of dealership, disbursement was never regular, and quantity and quality of the grains was always an issue. Further he used to give away large quantities of rice, wheat and sugar to his own people during marriage or festive reason because of which other rights-holders were deprived of the same. He had bribed, used his network to get the present dealer (who was in dealership for the almost 10 years) removed from the dealership post. However, the growing dissent amongst the villagers, coupled with the present dealer (OBC) filing a case in the high court against the *pradhan* for the dual possession of both posts, got his dealership cancelled and was transferred in the name of the present dealer.

Majority of the respondents did not complain about the quality of rice or wheat. It is very rare that the quality is bad and if so, they in fact rationalised it by saying that it could be due to the quality that comes from the storage (*Godam*). They seemed considerate towards the present dealer when saying that the dealer does manage it by mixing both the poor quality with the good quality of rice, so that everybody gets the same quality. Villagers seemed more tolerant towards these once-in-a while-lapses concerning the quality given that the dealer provided the PDS grains with certain regularity. Regularity of disbursement over quantity and quality takes precedence across all the villages in the three states. This is understandable, considering that there has been a history of irregular disbursements, and abuse by the earlier dealer in this village.

Further people did not want to again disrupt the PDS functioning by lodging complaints on issues that they did not think were completely non-negotiable. They knew that the relationship between the present dealer and the *pradhan* was based on animosity (both fighting a court case against each other on the possession of the dealership) and they did not want to add more fuel to the fire by giving ammunition to the *pradhan*, who anyway had a bad reputation.

Despite some lapses by the present dealer in terms of quantity and quality, including higher price than the subsidised price, his good behaviour and regularity of disbursement worked in his favour. Though the caste of the present dealer is same as that of most of the households (OBC), villagers did not seem to think it was important. “*Whoever is in that position and can disburse the PDS grains properly, irrespective of their caste, matters*”, they opined.

4.5.4 Considerations of status as a mediator of demand

In Village B1, women from the upper castes noted that, “*Women from good families do not go to collect PDS grains, it is the men who go, and women from the lower castes.*” Yet, how the upper caste women access their PDS grains differed by village. While in village B1 the upper caste women thought it was below their dignity to go to the PDS shop, in village B2, owing to their relatively low economic status, they did not shy away from doing so. Caste, gender and class all work together in this context.

In fact, in village B1, one of the upper caste women (economically better off than most of the lower caste households) was very vocal about her right to the PDS grains said: *“I get the right quantity. However, crowded it may be during disbursement, I always choose the good quality rice sack. I pay Rupees 100 which is higher than the quota price, but I do not mind.”* It is quite interesting that women from upper caste were very vocal about their entitlement. In this case, there was an implicit show of strength when she narrated how in earlier days she was in good terms with the current *Mukhiya* (of the same caste as hers) and how her son was an active supporter of his. Interestingly, the upper caste households do not use PDS grains for self-consumption since most have access to their self-produced grains.

The comparatively well-off households, even if they do not need PDS as much, make it a point to collect the grains since they have a ration card and believe it to be their right to get it. The PDS grains are either sold off (the money of which is in control of the women of the household who spend on either jewellery or other delicacies), fed to the cattle or given away to the agricultural labourers who work in their fields in lieu of wage.⁴⁴

There are instances of aberration too where despite being of upper caste, being single, young with low economic status, the experience of access is quite different for women. Sundari Devi who is in her late 20s (upper caste widow) with a 10-year-old son has never gone to the PDS shop. She sustains herself mostly by taking up small tailoring jobs that her neighbours get her. Being young and a widow, she feels vulnerable to villagers discussing her and her going out as an object of transgressing. This constrains her from accessing PDS grains. She sends her 10-year-old son to fetch it. The position of the women in the social and institutional milieu bears on woman’s difficulty in accessing her entitlement despite being young and capable.

Though I have argued broadly that homophily does not work for the rights-holders, notably, the caste of the dealer worked for some of the upper caste women to their advantage. As explained by one of these women from the Bihar village, *“He (dealer) cannot misbehave*

⁴⁴ The vocal respondent from the upper caste appeared quite well-off in terms of a well-constructed pucca house with a room full of stocked grains. Her husband was a priest, son was in the city-Patna running a shop. She has landed property which she had given away on lease to the lower caste agricultural labors for crop cultivation)

with us. He has the reverence considering that we are from the upper caste (Bhumiyaar caste specifically). The dealer takes extra care when we go to the PDS shop. He will not make us wait. He will let us choose the sack of rice that we will want to pick". The caste equations with a vertical structure meant that lower caste always held higher caste in reverence, partly explainable as a historical continuity. Yet, some part is attributable to the asymmetric economic and political power based on caste differences. Moreover, the location of the PDS shop too mattered. In the village, the PDS shop was located near the *Mukhiya*'s house (upper caste).

4.6. Summary

In this chapter, I focus on the experiences with the PDS and examined the nature of food entitlements accessible to differently positioned people, based on gender, caste and class. I use both data from quantitative as well as qualitative study in the three states. My objective is to capture the nuances of access of PDS grains, by exploring both the honouring of the entitlement and the nature of treatment meted out to the entitlement holders. I also capture the locational heterogeneity as well as the differentiation based on group identities. Towards this I begin with the traditional markers of quantifiable access in a food-based safety net programmes i.e. quantities and prices

Given the pre-existing differences in the entitlement itself, I take care by looking at quantities and prices by mapping them to the legal entitlements. Hence, in terms of quantities obtained from the PDS, I look at the wedge between entitlement and actual disbursement capturing compromises in access by this gap. In case of price, I develop an alternative marker called effective price i.e. price weighted by the entitlement to accrual ratio. This measure creates relevant variation in the price measure since otherwise price is not an instrument in which there exists any significant variation particularly after the enactment of the NFSA.

Given the cross-sectional nature of the data, in the empirical analysis, I use a rich set of controls including village fixed effects, which consistently reflect significant heterogeneity across all measures of access. There is limited evidence from quantitative data that entitlement snatching takes place in terms of amount of grains or prices charged. However, in terms of effective price there is evidence for low caste women being charged a higher

amount. The opposite holds for higher caste households. By and large though there is evidence of some differentiation based on identities such as gender, caste and class, price and quantities do not seem to be the instruments that bring it about.

Quantitative results provide several insights into the pathways through which group disadvantage can emerge in the PDS. There is robust evidence of larger families being subjected to compromises in entitlement and access to certain ration cards being an important determinant of entitlement preservation. Since so much is invested in the ration cards of different forms, local power and political economy become very important in determining access through controlling these cards. Despite being a universal right, control over ration cards becomes a strong instrument for discriminating against women, the lower castes and the economically less powerful. While overt discrimination is less visible after the passage of the NFSA, quality is one instrument that can be more easily used for differentiation because of its intangibility and imperfect observability.

Though I found limited evidence on direct entitlement snatching in terms of the quantity or price of grains, the qualitative data highlighted the locational heterogeneity in gendered access as well as the differentiation based on group identity. While caste is an important marker of social identity in India, some of the expected benefits of homophily do not exist. In fact, with their newfound power, the lower caste dealers end up being more aggressive in denying rights to their own caste groups. The quality of services is markedly inferior for the groups in focus here, revealing several latent methods through which discrimination is practiced, including lack of information, mixing of inferior grains, longer waiting time and even verbal abuse. Lack of service with dignity, not just by devaluing women's work and time, but also compromising their dignity as rights-holders, could shape the needs and preferences for minimizing the interface with the PDS dealer.

Chapter 5: Affirmative action and Political decentralisation in PDS governance

This chapter deals with issues in governance with respect to the functioning of the PDS. I focus on issues related to decentralization of administrative power and functions, affirmative action for empowerment of the subaltern groups (in terms of identities based on gender or caste) and functioning of local institutions such as the *Panchayati Raj Institutions* (PRIs), multiple agencies in the whole PDS supply chain that determine effectiveness of systems such as inspections and grievance redressal.

According to Mukhopadhyay (2005), in its simplest definition, decentralization is a form of governance that transfers authority and responsibility from central to intermediate and local units. In much of the discourse on decentralization, reform is expected to make the allocations more efficient (allocative efficiency in economic terms) and deliver on equity (Dreze and Sen 1989, Swaminathan 1990; Appu 1996; Sengupta and Gazdar 1996; Kohli 1997; Manor 1999; Besley, et al. 2004; Faguet 2004; Bardhan, Mookherjee, and Torrado 2005; Raabe et al. 2009).

In addition, it is expected to improve the quality of services embedded in the delivery mechanisms. Thus, governance reform is meant to make the system more responsive, accountable and less discriminatory. The pathway for improved outcomes because of decentralization comes mainly from the assumption that because decisions are being taken in lower levels of governance, citizens have more control over decisions taken (Mukhopadhyay 2005). It is thus worthwhile to examine if the opening of new political spaces at the local level is especially relevant for women and other groups who have been traditionally excluded from decision making processes (Manor 1999).

Even with decentralization, there are pre-existing factors related to gender, caste and class that impinge upon the outcomes related to experiences with the PDS. Hence, there are policy actions at the level of local government or the governance of the PDS system itself that can improve the outcomes particularly for the weaker and more vulnerable sections. Affirmative action where the weaker section gets decision making authority or handle service delivery is expected to help the sections that are otherwise discriminated against. In relation to the PDS,

governments have introduced affirmative action with significant granularity. Hence, there are reservations even at the level of PDS dealership based on gender as well as caste.

In relation to social affirmative action, I specifically focus on two aspects: first, how does affirmative action at local governance level (mainly in terms of heads of the local government—the *sarpanch* or village head i.e. the *Mukhiya*) affect the functioning of PDS, in terms of access per se as well as quality of access particularly for women and lower caste households. I focus on reservation for the post of the head of the *Gram Panchayat* (GP) in favour of women and scheduled castes/scheduled tribes (SC/ST). I specially look at issues such as access to eligibility card, grievance redressal and protective mechanisms against compromises in the entitlement. There are several indicators of governance that I utilize in this chapter. For example, does reservation for women in local panchayats as *sarpanch* or SC/ST/OBC), change the way the local people experience the PDS?

Despite the directive to all the Union ministries to provide a role to *Panchayati Raj Institutions* (PRI) in the implementation of the centrally sponsored schemes only two schemes, namely MNREGA and Backward Region Grants Fund (BRGF) have involved the PRIs (Johri 2013) prior to the year 2013. Under NFSA, the involvement of PRI in the PDS has been made mandatory. In fact, the Aiyar committee report (2013) titled “Towards Holistic *Panchayati Raj*” had recommended leveraging PRI for the efficient delivery of public goods and services and mandated further involvement of PRI’s in the implementation of PDS. My surveys in the three states were conducted after the passing of NFSA.

In this chapter, I examine if the systemic changes in governance brought about by NFSA has/had any bearing on the access to social welfare programmes (PDS here) and experiences therein that would be reflected in the respondents’ needs and preferences. I also investigate, how affirmative action at the level of PDS dealership translates into better or worse experiences with the PDS and shape rights-holders’ preferences both retrospectively as well as prospectively. In examining both the objectives as stated above, I also try to incorporate local power relations, the informal rules and local practices, and examine how decentralization, and social affirmative action at the grassroots level affect not only the access but also the experience of the subaltern group.

There are several pathways which I explore from the point of view of governance in the PDS. Specifically, I look at roles and perceptions of the PDS rights-holders regarding the functioning of the PDS in terms of the following:

1. Decentralization in local governance
2. Political participation of the subaltern (both women and SC/ST/OBC)
3. Caste and/or gender-based reservations instituted at the level of dealers in the fair price shops.
4. Local preventive institutions like system of inspections in the PDS
5. Local corrective institutions such as those for grievance redressal constituted in the PDS or in the local government.
6. Interactions of governance structures in the PDS or beyond with the social conditions including local power relations
7. Perceptions about governance, governance failures and differences with their actual state

Throughout, I try to incorporate the heterogeneity embedded in contextual differences that bear on the roles of governance structures and the representation of subaltern groups in local governance. These include social structures and norms, local political practices, characteristics of the village among others.

The rest of the chapter is organized as follows. In section 5.1 I frame the debate around decentralization and social affirmative; in the section that follows I draw from my survey, both quantitative and qualitative, to analyze governance issues in PDS. Following which I then examine the rating of PDS by the rights-holders as a function of governance factors. Last section concludes.

5.1. Literature review: Framing the debates around decentralization and social affirmative action

5.1.1 Local governance structure in India

In 1992–93, the Government of India passed a series of constitutional reforms (the 73rd constitutional amendment) to democratize and empower a third tier of government at the

sub-state level called *Panchayati Raj* Institutions (PRIs). The reforms marked a significant transition from a two-tier system of governance (union and state) to a three-tier one. The restructured system with 3 tiers comprises the union, the states and the local government viz. the Panchayats. This frame of rural local government is based on the principles of democratization, devolution of powers and resources for planning as well as community involvement in the implementation of development programmes (Mohan 2009).

Bardhan and Mookerjee (2005) state that there is a presumed argument in favor of decentralization that electoral pressure from local citizens can make the local governments more accountable. They argue that decentralization can reduce bureaucratic corruption associated with centralized governance. However, it can also land power in the hands of the local power elites who can distort and divert public programmes including the PDS to benefit themselves at the expense of others particularly less wealthy and weaker sections. Hence, the introduction of the *Panchayati Raj* reforms also had accompanying affirmative action i.e. reservation of seats for women and marginalized groups such as scheduled castes and scheduled tribes based on their population shares. The exact extent of political representation is decided by respective states' legislatures, and hence varies by state. In fact Sekhon (2006) tracing the evolution of *panchayats* as well as the women's political participation in India, notes that participation was first proposed in 1959, followed by the recommendation of the Commission of the Status of Women in India in 1974 to set up women's panchayats, which led to the Ashok Mehta commission report in 1978 that strongly recommended the inclusion of women in the *panchayat*.

Decentralization and the associated functional, financial, and administrative autonomy of individual government units has been an "important strategy for increasing effectiveness and efficiency of service provision and local governance" (Raabe et al. 2009; pp. 1). All states must follow the principle of reservations of seats for women as well as Scheduled Castes and Scheduled Tribes that have been incorporated in the 73rd Constitutional Amendment. The core objective of move towards local governance blended with affirmative action is the creation of a more accountable system with greater transparency i.e. more participatory and responds to the needs and preferences of the local citizens.

With this motivation, Besley, et al. (2004) study at the village level the role of political reservations in delivery of local public goods for SC/ST households. They find that

affirmative action leading to greater political representation for the lower caste i.e. SC/ST groups increases significantly the provision of public goods for the weaker sections. Similarly, Pande (2003) shows that political reservation at the state level, for a group (SC/ST) leads to a higher incidence of policies towards that group.

Chattopadhyay and Duflo (2004, pp. 1429) study the consequences of mandated representation for women in *gram panchayats* (GPs) in two districts of West Bengal and Rajasthan and find that reservation policies have not only increased women's representation in these GPs, but also seem to have an important effect on policy decisions at the local level. They find that "women elected as leaders under the reservation policy invest more in public goods most closely linked to women's concerns: drinking water, fuel, and road construction." [Note that in the context of gender-based outcomes and their relationship with governance, there are some important differences vis-à-vis caste based political or institutional actions. Most of women's political action is generally community-based and it is mostly at the local level. With this context, women's participation in electoral politics can have a disproportionately large impact on outcomes relevant for women including in accessing programmes such as PDS.

Importantly, in any affirmative action, the effectiveness of granting of greater political rights hinges on the underlying social conditions or on the changed social conditions brought forth by the political or institutional representation itself. In the specific context of gender, Yuval-Davis (1997) argues that women's "effective citizenship" can facilitate their public engagement only when their political rights are combined with 'enabling' social conditions. As summarized by Mohan (2009, pp. 189), "Because women's responsibilities are traditionally perceived as lying in the private sphere (family and caring roles) and men's gender roles as being related to decision-making in the public domain, women are often excluded from the realm of public activity. This public/private divide, based on the classical theories of the 'social contract', contributes to relationships of inequality and difference between women and men."

5.1.2 Local power relations, gender and governance

Policy in India has always sought to see women and other marginalized groups' participation as an integral part of the process to enable entitlement seeking by local communities. Though the decentralization and social affirmative actions are built on the plank of empowering the subaltern groups, these institutional changes interface closely with the existing modes of local power, social norms that marginalize women and the weaker sections. These local power relations often compromise the goals and outcomes and give way to elite capture (Bardhan 2002). In this context, significant literature shows the subversion of the agency of elected women in panchayats, and the scheduled communities and this must be accounted for (see Thorat and Lee 2006; Vijayalakshmi and Chandrasekhar 2001; Jayal 2006; Bardhan 2002).

While the reservation of seats has given an opportunity for the disadvantaged groups to find a place among elected representatives of the panchayats, Vijayalakshmi and Chandrasekhar (2001), believe that the power has not been devolved to the extent needed and has thus not transformed into actual power. Batliwala and Dhanraj (2004) also critically examine the myths around gender positioning including the one relating to women's reservation in the panchayat (they refer to it as "pull quota"). According to the authors, the studies looking at the potential impact of political reservations often underestimate the roles of existing modes of power and politics to corrupt, co-opt, or marginalize the beneficiary groups.

Ghatak and Ghatak (2002) in their study of West Bengal *Panchayats* also point that decentralization automatically does not translate into greater devolution of power or participation of people. The authors specifically point to the need for inclusion of women and minority group like SC/STs. This follows from the observation that participation/attendance rate in decision making bodies was subpar, assessed as being far below the share of the eligible voters. An issue that I also observed and emphasize based on my field surveys relates to the official meetings (where decisions are taken at the local government level) being dominated by men and non-SC and non-ST groups. The caste and gender bias in the attendance rates of village constituency meetings is attributed to the ineffectiveness of voice and the corresponding feeling of not being heard. In my assessment

of the governance issues I also record a far-flung sense of resignation among the households when it comes to utilizing the powers bestowed to them because of governance reforms.

The practical realities of decentralization outline several other issues. Inbanathan (2009) in his study of the state of Karnataka for example finds that amongst the elected representative in all the three tiers of *panchayat*, there has been a pronounced lack of interest towards contesting elections. This was due to forced political participation because of legislative changes such as reservations for women. Hence mandated political representation has often not translated into actual participation.

Vijayalakshmi (2002) in an earlier study on Adivasi (ST) women in local governance in Mysore district, Karnataka shows that women's political participation needs more than just instrumental representation. Political marginalization of women, is related to their exclusion from social and economic bases of power. The complex issues related to Adivasi (ST) women's political status suggest that it is not just a matter of mere exclusion from politics. The problem of these women is one of lack of economic and social power as well. Goetz (2003) shows that it is not just gender hierarchies that limit women's role both in the public and private space but that other types of power asymmetries based on caste, class, religion subordinate women's participation in both private and public spheres.

Women, for instance, were generally compelled to contest by male members of their families, or other men, who were prominent members of the village (elite). Not surprisingly for most women representatives, their husbands or other men of the village were the "de facto" representatives (Vijayalakshmi and Chandrashekar 2003). Such proxy representation has been quite prevalent, and my surveys indicate this to be quite generic and seamlessly extending to the case of caste-based reservations in the local government as well. This is a grim reality of the governance reform that has been tried in different forms.

Hence, one of the major paradigm shifts in rural India post the 73rd Constitutional Amendment in 1993 was the shift in how women were viewed from the perspective of welfare, role in policy making and execution and in enabling women's empowerment. The hypothesis is that with women in local government and/or in PDS system as dealers, it would lead to more gender-responsive provision of public goods and services, more inclusive and equitable arrangements and better socioeconomic outcomes for women and girls.

Buch (2000) examines the experience and impact of rural women in their leadership position in the local government in the three northern states of MP, Rajasthan and UP. The study concludes that women's experience in these positions depend substantially on the socio-political context. Addressing the issue of women being merely proxy members, the author finds that the level of awareness about issues and participation among women suggests otherwise.

Further, Buch (2000, pp. 19) also finds that though more than 50 percent of the community members held positive view about women representatives, others have opinion of women being "incapable, non-cooperative, not seeking cooperation of higher level politicians and development functionaries, do not get any cooperation of other members, and they are illiterate." In UP, one of the states where I did the survey, majority of respondents held the view that women representatives did not do the work themselves. Their husbands or other male members worked on their behalf. Duflo (2005) similarly shows that, despite their proven expertise in running public offices (panchayat in this case), villagers appear to be comparatively less satisfied with the performance of female leaders than with the performance of male leaders. This finding is rationalized in terms of low density of women in the panchayats and the cultural barriers.

One relevant factor in relation to mandated reservation policy (caste or gender based) in local government or PDS dealership is the resulting quality sorting i.e. those who utilize reservations are less skilled as a manager. If reservations were to result in comparatively less capable or incompetent office bearers, the negative selection could adversely affect the outcomes. Though negative selection of the politicians in local government is a real possibility, Duflo (2005) rules it out at least for her sample arguing that there is not much evidence to prove that negative selection resulted in lower quality of decision making.

Raabe et al. (2009, pp. 2) focus on Karnataka to assess the effect of women's reservation policy on service delivery and local governance. Karnataka is an ideal state to assess the effect of women's political reservation considering that the law has been in effect for long (since 1993) in comparison to other states. The authors suggest that gender disparities at the local government level are driven by a multitude of factors and that a "portfolio of strategies

is needed to promote gender-equitable outcomes in rural service provision” and in this case, PDS.

Various networks are at play through which local governance, rural service provision, and ultimately access to PDS works. Importantly, the findings in Raabe (2009, pp. 2) even in a comparatively well governed state like Karnataka do not suggest “gender-equitable outcomes in rural service provision” due to reservation, instead “social, economic, and institutional factors constrain effective local governance and rural service provision beyond the women’s reservation effect.” Outcomes like this are expected in cases of services such as the PDS. The handicap is further compounded with the intersection of gender with characteristics such as caste and/or class.

On similar lines, Besley et al. (2005) assess the effect of women’s reservation for targeting below-poverty-line (BPL) cards in Andhra Pradesh, Karnataka, Kerala, and Tamil Nadu. The results seem to be ambiguous. Although reserved and unreserved GPs do not differ in the targeting of BPL cards to SC and ST households i.e. as per the mandate. GPs with reserved female presidents are found to be more likely to target BPL cards to ineligible members of the GP. The likelihood that a politician herself has a BPL card is higher with a female *pradhan*. According to Besley, Pandey and Rao (2005), this could reflect moves by women to show their position of power or even be that could reflect limited ability to monitor other politicians. The targeting of BPL allocation among villagers is however unaffected.

Vijayalakshmi (2008, pp. 1267) expresses the concern that lack of electoral accountability of women owing to “de facto politics (where individuals other than the elected representatives carry out the functions of the *Panchayat*)” reduces the importance of local institutions as mechanisms of transparency and accountability. Hence, even when women may not be directly involved in the corruption network, the official position of women representatives is being used by their family to receive illegal payments (about which the women are fully aware most times).

However, despite many imperfections, researchers do acknowledge that the combination of decentralization with affirmative action is a “significant institutional step in promoting grassroots democracy in India” where about 70 percent of the people reside in rural areas (Sekhon 2000). Yet, the role of reservation is not uniformly ineffective, and there is evidence

to suggest that the quotas have enabled “women to address their practical gender needs and interests, even if the articulation and realization of strategic interests is moving at a somewhat slower pace” (Jayal 2006, pp 15). However, translating a legal measure into effective change at the grassroots level remains a key challenge in empowerment of the weaker sections in the democratic social process, thereby ensuring enhanced access to social welfare programme (Sekhon 2006).

Thus, much of the literature depicts elected women representatives as “surrogates” or mere “tokens” entangled in clichéd patriarchal parameters of family and community. Examining whether having women at the helm of affairs at the local level improves access to services (here PDS) for women is an under-developed area of research. In addition, studies on whether female political representation or for those belonging to lower castes fully encompass the decision-making dynamics within the PRIs is still ambiguous in nature. Clearly this cannot be achieved without looking closely at what is happening to women and the reserved on the ground. I assess how far the governance related changes empowers women and other weaker section and strengthens their agency to access entitlements (PDS in this case) with improved quality in services.

5.2 Empirical analysis of governance issues in the PDS: Evidence from survey data

5.2.1 Perception around the role of the Panchayat in the functioning of the PDS

In this section, I draw evidence from states of Eastern UP, Odisha and Bihar to establish how decentralization and social affirmative action determines access including the experience of the rights-holders with the PDS. Firstly, I examine rights-holders’ perception of PRI in the functioning of the PDS, and then I unpack the analysis of the effect of caste/gender-based reservations both in the local governance as well as in the dealership of PDS. The issues of decentralization and social affirmative actions are intertwined, and hence overlap in the analysis.

As per the NFSA (2013), including the Public Distribution System (Control Order of 2001, notified on August 31, 2001 State and Union Territory (UT) Governments must involve the

PRIs in the implementation of the PDS. It states that *Gram Panchayats* or *Nagar Palikas* or Vigilance Committees or any other body nominated by State Governments will be responsible for monitoring the functioning of the FPS. The expected role of the PRI's comprises the following: (i) Finalizing the list of rights-holders belonging to the BPL and AAY households (ii) Monitoring the functioning of Fair Price Shops including the distribution of grains (FPS) executing requirements like display notices regarding entitlement of food, stock and sale registers (iii) Inspection of FPS records, ensuring availability of FPS licenses to the legitimate holder; and (iv) Conduct social audits for distribution of PDS commodities.

With these specified roles for the PRIs, I examine the rights-holders' perception relating to PRI delivering on their expected roles. In terms of how the rights-holders perceive the role of the *Panchayat* in the functioning of the PDS, I framed the question on a Likert scale with the first level being not important to the highest level being extremely important.

Nearly 84 percent respondents in Odisha, one of the comparatively well-governed states (in relation to Bihar and Eastern Uttar Pradesh), perceive the role of PRI as 'important' for better functioning of the PDS (Figure 15). In states like Bihar and Uttar Pradesh, the local government elections had not taken place for a long time or had been delayed and this could bear on the expectation from the local government.

Panchayat elections in Bihar were conducted in 2001 after a long gap of almost 10 years, Khera (2011) notes this led to considerable improvement in the PDS, with leakage plunging to almost 20 percent from over 40 percent. However, as per the evaluation study NCAER (2015), although Bihar becomes a 'reviving state', the state still has a long way to go to make the food security programme successful from the perspective of governance.

The roles played by the PRI are also a function of the accountability in the system which improves if there are regular elections. Based on my primary survey, while in Bihar only about 29 percent perceive the role of PRI as important (Figure 15), nearly 44 percent respondents agree that the regular election of the *panchayat* that puts pressure on the incumbent with fear of being voted out improved the functioning of the PDS (and an almost

equal percentage also had similar views in Odisha).⁴⁵ However, in EUP only about 12 percent said that the PDS has improved post the *panchayat* elections. These differences could be explained by local elite capture, caste or gender discrimination and power relations (which I discuss later). The notions about the PDS in UP could also be conditioned by the major PDS scam that took place between years 2002 and 2010 wherein food grains worth ₹350 billion (US\$5.3 billion), meant to be distributed amongst the poor, through PDS and other welfare schemes, were diverted to the open market, elections to the local government notwithstanding.⁴⁶

Figure 15: Perceptions regarding role of PRIs in the functioning of the PDS

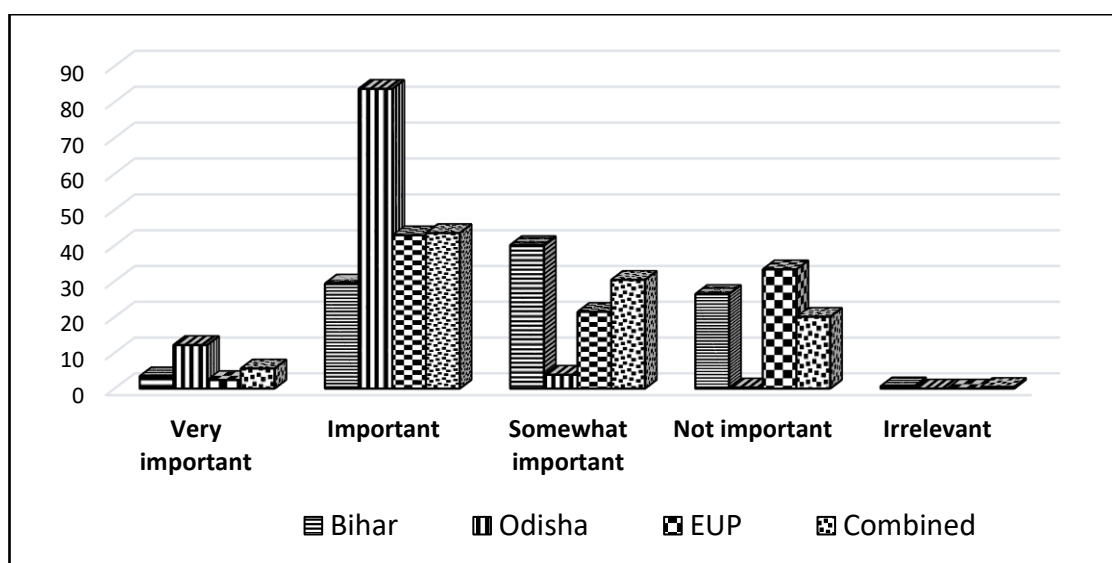


Table 13 presents simple probit regression’s marginal effects to identify characteristics of the households associated with the perception that elections improve the functioning of the local government that in turn affects the functioning of the PDS. The regressand is the binary variable whether elections improved the functioning of the PDS. The second column in table 13 presents the marginal effects of the probit regression without village fixed effects while column 3 presents the results of the specification with village fixed effects. As before, the standard errors are clustered at the village level.

⁴⁵ Under the Bihar *Panchayat Raj* Act of 1947, *Gram Panchayat* elections were held regularly till 1978. No elections were held till 2001 although the new legislation was enacted in 1993.

⁴⁶ <http://www.thetop10s.in/top-10-corruption-in-india/>; <https://www.freeonlineindia.in/list-of-major-scams-in-india/>; <http://www.dnaindia.com/india/report-rs35000-crore-food-grain-meant-for-uttar-pradesh-poor-sold-outside-1477736>; <https://timesofindia.indiatimes.com/india/UP-foodgrain-scam-trail-leads-to-Nepal-Bangladesh/articleshow/7078569.cms>;

Few important points emerge from the regression results presented in Table 13. First homophily in the form of shared caste with the dealer leads to perceptions of the local government being more amenable towards addressing the problems faced in relation to the PDS. If the FPS that the household has been subject to government inspections, it seems to be associated with a perception of improved functioning upon the perceived increase in the accountability of the local government.

Table 13: Perceptions regarding elections in PRI improving the functioning of the PDS

VARIABLES	Elections improve function (1=yes , 0 if no)	Elections improve function (1=yes , 0 if no)
FHH (Female headed household 1=yes, 0 otherwise)	0.0597**	0.0210
	(0.0283)	(0.0359)
Schedule caste	0.115	0.0955
	(0.153)	(0.123)
Schedule tribe	0.0396	0.0538
	(0.138)	(0.129)
Other Backward caste	0.0886	0.126
	(0.138)	(0.123)
General caste dummy	0.217	0.176
	(0.182)	(0.170)
Monthly non-Food expenditure	5.12e-07	8.82e-07
	(9.51e-07)	(9.74e-07)
Are mukhiya and dealer of the same caste	-0.00334	0.0204
	(0.0791)	(0.0570)
Government functionaries inspected the relevant FPS	0.316***	0.277***
	(0.0503)	(0.0505)
Same social group with the dealer	0.190***	0.134***
	(0.0387)	(0.0407)
BPL card holder	0.0228	0.0380
	(0.0738)	(0.0405)
AAY card holder	-0.0610	-0.0206
	(0.0424)	(0.0463)
Village Fixed Effects	No	Yes
Standard errors clustered at village level	Yes	Yes
Observations	1,428	1,290

5.2.2. Interactive roles of the nodes of governance

One of the potential governance issues is the collusion between the local government officials and PDS functionaries. The potential for collusion is higher when the two entities share the same caste. Hence, I gathered information on whether the caste of the village head (*mukhiya*) and /or PDS dealer matter for the functioning of the PDS. Also, does it matter more when the caste of the two entities are the same than when it is different? (See annex 4 for the questionnaire)

Across the three states, more than 50 percent respondents stated that the *Mukhiya* and the dealer were not of the same caste, nor from the same *tola* or ward. In Odisha and EUP more than 50 percent (66 percent in Odisha and 64 percent in EUP) do not feel that the same caste of the *Mukhiya* and the dealer makes any difference to the functioning of the PDS, while in Bihar it was 48 percent. Note that nearly 35 percent in Bihar, a sizable share did feel that the same caste of the *Mukhiya* and the dealer affects the functioning of the PDS and in an adverse way.

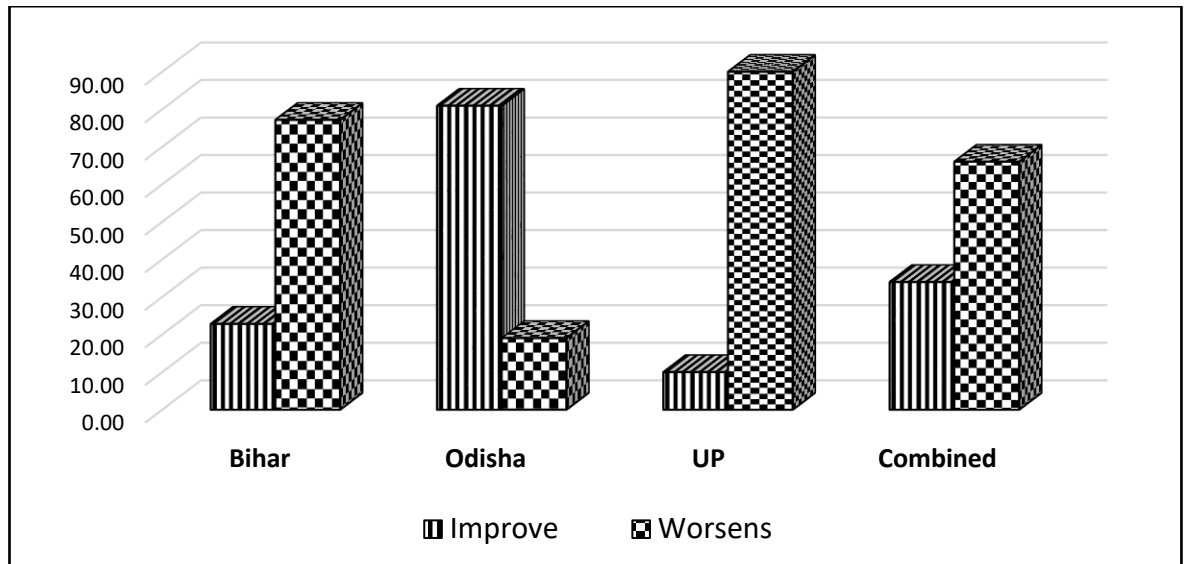
What is unique is that though a significant percentage in EUP did not feel that the same caste of the *Mukhiya* and the dealer affects the functioning of the PDS, among those who believe that it does matter, nearly 90 percent perceive that the roles of the panchayat in doing its job related to PDS tends to worsen if the caste of the *Mukhiya* and the dealer were the same. The corresponding figure for Bihar is also high at 77 percent.⁴⁷ In Odisha (predominantly tribal and a homogenous group), respondents feel the opposite that with the same caste there is better coordination and nearly 81 percent feel that it improves the functioning of the PDS (Figure 16). These patterns hold true across gender and caste, a significant percentage (more than 50 percent) women feel that the same caste of the dealer and the *Mukhiya* does not make any difference to the functioning of the PDS.

However, (as discussed in chapter 4, section 4.5) qualitatively it was observed that the PDS functioning worsens if the dealer is of the lower caste and the *Mukhiya* is of the higher caste (for example in Bihar). Hence, not only the caste but the relative ordering of the caste also

⁴⁷ This in in line with the evaluation study of NCAER (2015) where examining the role of PRI in some of the districts of Bihar it was found that the “entire PDS functioning, including the local FPS, is controlled by upper caste in several villages in these districts. If any of the beneficiaries from the *dalit* community or lower castes complain against the FPS, his family is ostracized. There have been instances of beneficiaries being threatened because they complained of receiving less than their entitlement from the FPS dealer”.

matters from the point of view of governance in the PDS. If the dealer is of the lower caste, the *Mukhiya* can make him or her do things as per his special interest rather than the mandate for general interest.

Figure 16: Caste parity between *Mukhiya* and dealer and the functioning of the PDS



(Conditional on perception that it matters)

As discussed above, affirmative action can either be at the level of local government but also through reservation for the dealership based on caste or gender. Above, I look at the implications of caste match between the *Mukhiya* and the dealer. Next, I assess the perception of the households as to how important it is that the household shares the same caste as the dealer. I collected information from households regarding the importance of shared caste with the dealer on a Likert scale with 1 being the marker for extremely important to 5 being the marker for irrelevant (see annex 4 for the questionnaire). Table 14 presents the estimates of the ordered probit regression and the marginal effects estimated at mean.

In modeling household's degree of valuation for homophily with the dealer, I measure it on an ordered scale. The ordered valuation here i.e. intensity of valuation for homophily with the dealer are modeled to arise as a latent variable y^* that progressively crosses higher thresholds of perceived net utility of sharing the same caste with the dealer. The i^{th} threshold parameter are called cut points or threshold parameters. They are estimated by the data and help to match the probabilities associated with each discrete outcome. In the current set up y^* is the unobserved difference in the net utility of sharing the same caste group with the

dealer over not sharing. Hence for household i , the relationship explaining the underlying latent variable is specified as:

$$y_i^* = x_i' \beta + \varepsilon_i \quad (4)$$

The normalization in equation 4 is that the right-hand side regressors do not contain the intercept term (Cameron and Trivedi 2009). x_i' represents the vector of household/consumer characteristics such as gender, age, household composition, social identity, income and budgetary share of food among others.

For very low net unobserved utility difference between homophily and no homophily, household considers homophily to be totally unimportant i.e. for a very low value of y^* . For values of $y^* > c_1$, the household assesses homophily to be somewhat important. Similarly, subsequent cutoffs of c_2, c_3 and c_4 pin households to additional categories of important, very important and extremely important.

In general, the probability of a certain state of valuation in an ordered probit model is given as:

$$\Pr(y_i = j) = \Pr(c_{j-1} < y_i^* \leq c_j) = F(c_j - x_i' \beta) - F(c_{j-1} - x_i' \beta) \quad (5)$$

Where F is the cumulative distribution function of ε_i . In case of ordered probit models ε_i is assumed to be normally distributed. With the standard normal assumption on ε , probabilities of the responses $P(\{y = 0|x\}), P(\{y = 1|x\}), \dots \dots \dots P(\{y = 4|x\})$ sum to unity.

Note that the sign on β_k unambiguously determines the direction of the effect of x_k on $P(\{y = 0|x\})$ and $P(\{y = 4|x\})$ i.e. the extreme outcomes but not the probabilities of the intermediate outcomes. If $\beta_k > 0$ then $\frac{\partial P(\{y = 0|x\})}{\partial x_k} < 0$ and $\frac{\partial P(\{y = 4|x\})}{\partial x_k} > 0$. Apart from this if we have to analyze the effect of a regressor in a meaningful way, I need to look at the marginal effects on each ordered response which I do in case of results produced below.

Table 14 presents the results (coefficients and marginal effects) of the ordered probit regressions on the propensity to express the different levels of valuation for homophily with the dealer. My main variables of interest apart from the household and individual

characteristics are experience of caste-based discrimination if any and information levels about the PDS delivery mandates that can play a protective role over and above homophily. In addition, I include several governance indicators that minimize the impact of homophily.

Table 14: Importance of homophily with the dealer and its determinants. Ordered probit model estimates

VARIABLES		Marginal effects	
			-0.0195** (0.00881)
			-0.0507** (0.0233)
How important is homophily with the dealer? (5-point Likert scale	Does government functionaries inspect PDS functioning (1 if yes, 0 if no)	0.28**	-0.0228**
		(0.128)	(0.00937)
			0.0736** (0.0337)
			0.0194** (0.00803)
			0.04** (0.018)
			0.104** (0.0422)
			0.046** (0.020)
	Schedule Caste	-0.5** (0.249)	-0.151** (0.064)
			-0.0400** (0.0174)
			-0.002 (0.017)
			-0.007 (0.04)
			-0.003 (0.020)
	Schedule Tribe	0.0432 (0.258)	0.0111 (0.066)
			0.00294 (0.0177)
	Minority	0.9***	-0.06***

			-0.109*
			(0.0601)
			-0.0288
			(0.0185)
			-0.0224***
			(0.00820)
			-0.0583***
			(0.0208)
	perception that election improved functioning	0.3***	-0.0262***
		(0.117)	(0.00904)
			0.0845***
			(0.0298)
			0.0223***
			(0.00851)
			0.0415***
			(0.00934)
			0.108***
			(0.0236)
	Mukhiya dealer same caste leads to adverse outcomes (perception)Yes	-0.6***	0.0485***
		(0.125)	(0.00977)
			-0.156***
			(0.0318)
			-0.0413***
			(0.0113)
Other controls			
Does Mukhiya inspect PDS functioning, FHH, Age, BPL card holder, AAY card holder, whether money paid in getting ration card, FPS in village, positive perception of allocation, use of electronic weighing by FPS, entitlement allotment wedge			
	Village fixed effects	Yes	Yes
	Clustered standard errors at village level	Yes	Yes
	Observations	791	791
*** p<0.01, ** p<0.05, * p<0.1			

Empirical results on shared caste with dealer that I label homophily does not have straightforward effects. While with most castes there is no association with perceived importance of belonging to the same social group as the dealer, as evidenced in qualitative surveys, amongst the scheduled caste, it is often perceived as counterproductive as the dealer often turns out to be a steward of the local elite (also see Chapter 4, section 4.5).

Importantly, households who believe that shared caste between *Mukhiya* and the dealer leads to adverse outcomes are also associated with lower valuation of importance of sharing caste with the dealer themselves (see table 14). In other words, even if one shares the caste with the dealer, he or she is sharing caste with *Mukhiya* could have an offsetting effect. Also, it is important that for other social groups based on gender or caste there is no significant association with valuation of sharing caste with the dealer. From governance perspective and attending to the needs of the rights-holders, this is a very important finding. It highlights the boundaries of affirmative action in terms of attending to the needs of the weaker sections as there often are several local countervailing factors that undo the possible benefits of affirmative action.

5.3 Gender based affirmative action and the PDS

Though there have been affirmative actions by the government to recognize women as agents of change through reservations in various welfare programmes, in PDS, it is mostly for the dealership position. The prior is that with women at the helm of affairs, access to one's rights might lead to enhanced and better access to the PDS. Recall that affirmative action is mandated in the fair price shops (FPS) i.e. the last node of delivery in the PDS. Table 15 presents the summary of PDS control order regarding the reservations in the FPS dealership applicable across states.

Table 15: Reservation for FPS dealership applicable across states as per the PDS control order

Category	Percentage
Scheduled caste	16%
Scheduled Tribe	1 %
Extremely backward classes	18%
Backward classes	12%
Women belonging to backward classes	3%

From my primary surveys, it was evident how the deeply entrenched patriarchy worked in ways that invoked a disempowering stance from women themselves. Most women interviewed across the three states believed women at the helm is not likely to change the outcomes, and this was true in the case of PDS dealership too. Most believed that “*a woman cannot do it*”, and that “*woman's work ultimately will be done by men*”. For example in one of the villages in Bihar, a woman respondent said, “*See the aganwadi workers, everything is handled by their husbands*”, a sentiment that was echoed by a lot of other women too. In PRIs, this means that, although women in theory have equal power as men, they might not stand with the same level of influence in matters that traditionally remain masculine tasks.

Another case in point is about the functioning of the Self-Help Groups (SHG) in one of the villages⁴⁸. I present this case to highlight the supremacy of local power relations. SHGs have been invested with power and responsibilities to address local governance issues. A woman was the head of the SHG. In this village from Bihar-B3, training was done by an NGO to mobilize women to be SHG members, to empower them through their own earning. The empirical reality was that the husbands controlled the women’s earning. Also, the interests of the SHG members often result in divisions and in conflicts. The elite within the group take advantage over others. SHG members themselves seemed divided about their role in the functioning of SHG⁴⁹.

Surprisingly, the head of the SHG women’s narrative on her access of PDS grains were no different from other women of the village. She too complained about how the dealer’s abusive behavior was same for her as well. Ultimately, she must send her husband to fetch ration, since with men, the dealer is a bit scared. But on her own admission, even though she earlier used to pay a higher amount for ration but after she joined the SHG, she was aware

⁴⁸ Self Help Group (SHG) is an informal group of local men and women with similar social and economic background which functions as an intermediate financial committee. Each member contributes a small sum of money on a monthly basis to the mutual fund. The pooled resources are used by the members (in form of a loan) to start one’s own business or for any other purposes based on the need. SHGs are seen as instruments of empowering the women, developing leadership qualities amongst the poor, among other social goals. Many SHGs are also linked with the banks for the delivery of micro-credit.

⁴⁹ See Kalpana. K’s 2011 narrative of SHG functioning that draws on an ethnographic study of 27 SHGs in three villages in one administrative block in a district of northern Tamil Nadu; Guerin’s 2013 study in their analysis of SHGs highlight how women continuously have to “negotiate a position in a context where dependence on men is considered natural”.

of the price. Though, she does not go to the ration shop herself, she now instructs her husband to pay the right amount.

Women interviewees in the three states were aware of the constraints in taking up public posts, and they see themselves as dependents, rather than as independent actors. This made women reluctant to consider themselves for the dealership position. While the lower caste women (for example in Bihar) said that they would first have to take the permission of their husbands, and if their husbands thought it was a viable proposition, with their support they were willing to try. On the other hand, though the upper caste women were very enthusiastic to take it up, they had a condition: *“It will be nice if women become dealers. I would love to be one. My son will run it on my behalf. He will help me with the account”* (*“likhayee-padhayee ladka karega* -the account keeping will be done by my son”).

Even the women PDS dealers that I interviewed in Bihar, not of the same village, but of a neighboring village in another *gram panchayat*, put in a similar argument. In the cases I covered, the management of the PDS was done by their sons, even it appeared that her son was running it by proxy. In both the interviews, their sons spoke on their behalf. In one of the cases, the female dealer kept requesting to excuse herself to make tea for us, and all the while urging us to continue the conversation with her son. *“yehi sab kuch chalata hai”* (he does everything), to which even the son proudly says *“villagers come to me if they have any issues with PDS, since my mother is illiterate. We run it very well”*. Finally, he added, *“at times my mother too sits in the shop, and I give her support”*.

At a higher level, qualitative analysis showed that in realms of gendered spaces where women are *sarpanch* (in case of my research the incidences that I cite will be from Odisha), access to resources and, entitlement like PDS food grains, becomes even more difficult. PDS as an entitlement must be understood as embedded in social relations and shaped by processes ‘on the ground’ rather than as a logical result of official statements and intentions.

5.3.1 Gender-based reservation in local governance mediates differential access to PDS

As Bardhan and Mookherjee (2005) have argued, there are several assumptions that underlie the reservation of women in positions as elected *Panchayats* leaders. The assumption that by reserving seats for women and Scheduled Castes and Tribes can prevent historically powerful groups from claiming political, economic and social resources, does not hold good for a single (widow), illiterate, ST women in O1 village from Odisha. The assumption that women's needs are better addressed does not seem to hold true even though it had a female *Sarpanch* of the ST group (Duflo 2004)⁵⁰.

Savitri Nayak, ST, widow, 55 years old, of shy nature was nominated for the post of *sarpanch* by the secretary of the *gram panchayat*, a government official and by the MGNREGA gram official. As discussed above, in many states elections were not held for decades and instead of the *sarpanch*, the *gram panchayats* were run by bureaucratically appointed administrators.

According to Savitri Nayak, in the absence of any other contender, owing to the reservation for women from ST category, she was unanimously nominated by the secretary for the post of the *sarpanch*. Being a woman, widow and illiterate, reins were in the hands of the male government official (secretary) and he was running the show under the purview of that *gram panchayat* (Vijayalakshmi 2002).

The pervasiveness of gender inequality seemed quite pronounced. Savitri Nayak insisted consistently that being a woman, she is helpless. Her oft-repeated excuse for any queries on grievance redressal for PDS was met with “*I am a woman, what can I do?*” “*Mu stree loka, mu kana karibi*”. Considering the broader context of tradition and norms, this might signify that women simply do not wish to interfere in affairs that are traditionally managed by men in the public sphere (Singh 2006).

⁵⁰ While Duflo (2004, pp. 10) in this paper has argued in favor of reservation for the disadvantaged groups (women, SC/STs) in the panchayat, she has at the same time cautioned that “if reservation is seen to emerge as a powerful and effective retributive tool for the disadvantaged group, it also restricts the voters choice set, thereby bringing to power a group of relatively inexperienced and less-educated politicians”.

While Johnson and Schulman (1989) in examining how women and men behave in smaller units, conclude that in a mixed gender setting, women and men are more likely to strictly conform to the ‘stereotypical performance’ of their gender if they are in minority. On similar lines, Kanter (1997) also finds that when a member is in minority (“of token status”) – regarding his or her ascribed gender or social category – is more likely to feel isolated and consequently act in ways that might portray him or her as being passive and inactive. In addition, Ban and Rao (2006, pp. 527) in their study of the four southern states of India find that “reserved GPs perform worse when most of the land in the village is owned by upper castes. This suggests that caste structures may be correlated with structures of patriarchy, making the job of women particularly difficult when they are confronted with entrenched hierarchies”.

The reservation of women in *Panchayat* pushes women with no prior experience or history of activism, into a system in which they are treated as ‘tokens or figureheads who are silenced and marginalized’ (Basu 2003, pp.20). Their lack of “political experience” makes women perform worse than men in the same situation (Ban and Rao 2006). Additionally, even the general perception amongst the SC/ST women of this village was that the female *sarpanch* is as helpless as they are, so there is nothing that she can do. This tallies with the perception of low importance of homophily discussed above. She was seen more as a figurative head than somebody who could address their issues. While the implicit assumption was that women in the village headed by the female *sarpanch* were more favorably situated in accessing their entitlements, it contradicts the empirical reality that they in fact are proxies of the male counterparts in the absence of a male member.

Most respondents said that they do not go to the *sarpanch* to register their complaint for issues around card, quality of rice as she is not expected to be helpful in addressing their issues. Few SC/ST women did complain that they had sent their husbands several times to complain to the *sarpanch*, but she just does not take any action. “*Our husbands’ just listen to her micha katha (false hope) that she would consider, and come back home*”, they said. On her own admission, Savitri said that during the monthly block level meeting, she does try to enquire about the ration cards, but she is always ignored. They refute her by saying that whenever the cards will be issued, the villagers will be notified.

She expressed her helplessness by saying that people do come to her with complaints about PDS rice quality and their ration card, but she is not in any position to help. Her helplessness is observed when she says: “*Every other day people come to me saying the rice quality is not good. “Mu kana karibi, mu stree loka. Mu kana nija gharu basmati chaula tanku debi”* (what can I do. I am a woman. Should I buy for them good quality basmati rice from my own pocket?)

Further Savitri Nayak, being illiterate she cannot even read what is written on the official document. For example, under the PDS rules, the license of the dealership is issued in the name of the *sarpanch* and the secretary of the *gram panchayat*, a government official. The dealer must take her signature on the demand draft for the month’s supply in their *gram panchayat* but being illiterate she just blindly signs on the draft. The secretary being a government official wields more power owing to his role in the village as one overseeing rural projects. For women like Savitri Nayak, to quote Vijalakshmi (2001, pp. 19) “It is a multidimensional exclusion in economic and social spheres that have consequences for participation in the political sphere”.

I discuss the case of Savitri Nayak because it covers the case of gender based as well as caste based affirmative action. The detailed findings from the field suggest clearly that a formal right to stand for elections, is no guarantee that an individual, can participate effectively in local governance that directly bears on the functioning of the PDS.

5.4 Concluding thoughts on caste based affirmative action and PDS

Social affirmative action (AA) has been widely debated for various reasons (section 5.1). Proponents of AA like Deshpande (2011) and Thorat and Newman (2010) argue that the disparities between SC/STs and upper caste in terms of standards of living, poverty rates, health status, educational attainment and occupational outcome, warrant the need for AA. Similarly, it has been argued that decentralized governance is the only way to ensure sustainable, equitable and efficient delivery of entitlement at the grassroots level (Mukhopadhyay 2005). However, whether democratic decentralization improves local governance for effective service delivery is highly contested.

In the following section, I illustrate how governance reforms do not actually translate into action because of definitive underlying factors. The main objective is to show how social structures obviate the potential benefits to be realized for the intended rights-holders. I take the example from the Bihar village B2 (see Chapter 4, section 4.5). To recap, the village had de facto two *Mukhiyas* (headman): one incumbent *Mukhiya* (upper caste *Bhumiyaar*) who had been in this position for many years, and the other a proxy *Mukhiya* (of lower caste).

The second was elected when the position was reserved for an SC candidate. The physical demeanor of both the *Mukhiyas* revealed their social positions. The upper caste *Mukhiya* who is tall, well built, rides a motor bike, speaks in an assertive tone. All throughout the interview, he would drop names and boast about his political connections at various levels. He would flaunt, how he had spent a large sum of money in the panchayat elections to make a lower caste man win the post of the *Mukhiya*, alluding to the wealth he has as a *Bhumiyaar* upper caste.

In contrast the lower caste presiding *Mukhiya* was of medium built, lean and physically challenged, walking with a stick. Villagers in jest often refer to him as the “*langda*” (handicapped) *Mukhiya*, both metaphorically as well as referring to his physical disability. He too seemed aware of his position and the sorry figure that he has been made out to be, of being elected the *Mukhiya* but under the patronage of the upper caste former *Mukhiya*.⁵¹

It was interesting that whenever I would ask for the *Mukhiya*’s house, everyone would point me towards the upper caste former *Mukhiya*’s house. Unsurprisingly, when I approached the lower caste *Mukhiya* for his interview, he directed me to the upper caste *Mukhiya*’s house: “*Mukhiya toh woh hain*” (he is the real *Mukhiya*). He looks after the governance of the village, he said. “Because of him I won the elections. People voted for him. He spent the money”, he said. The unabashed claim by the upper caste *Mukhiya* during my interview revealed the underlying power equations in this village: “*I have always been the Mukhiya of this village, my forefathers too. This time the government wanted a reserved category, so we arranged for one. If tomorrow, they wish for another caste we will arrange for one. We hear*

⁵¹ I got access to the newspaper clipping of the interview of the lower caste *Mukhiya* during my field work where he has spoken about his constraints working as a SC *Mukhiya*.

that the government is thinking of reserving the post for women from lower caste, which is also fine by us. We will arrange for one. Whatever is the government rules and norms, we will follow. But ultimately I have to see to the day to day functioning.”

Hence, though the caste of the *Mukhiya* changed, the effective governance of the village institutions did not. Note that the village has few upper caste (*Bhumiyaar*) households and that the majority were from SC and OBC category. Despite the power imbalance in terms of numbers, the upper caste seemed to wield more power. It is not surprising that the institutional framework of *gram sabha* governance occurred only on paper, attended by few upper caste and lower caste ward member.

The village was also unique in a way that the opposing *Mukhiya*, also from upper caste, who lost the election (he too had fielded a lower caste candidate), was the rising “messiah” (savior) for some factions of the lower caste. The fight between these two upper caste households, was also the major dividing factor. The village with two upper caste families divided on political lines, had engendered a divide in the social structure of the village. Those who have allegiance towards the present upper caste *Mukhiya* were favored while those who supported the other faction, were penalized. The divide was more visible in the way how the ration cards were used as a tool to garner votes during election (see chapter 4, section 4.5) where women recounted stories about how they were denied the ration card).

While the evidence from my research project highlights how the structure of gender and caste relationship constrains affirmative action (AA), I am not in any way discounting the findings from other studies that AA can influence social beliefs, discrimination etc. Chauchard (2014, pp.15) made a case that “once non-SC villagers engage in new forms of interactions with at least one member of the SCs (as *Sarpanch* or village head), they may also practice less discrimination against other members of the SCs, especially if those members belong to the family or the sub caste of the *sarpanch*”. In addition, the benefits of AA can also be long term. For example, gender quotas increase the level and quality of women’s political participation and female political leadership generates long term governance gains (Deininger et al. 2015 and Afridi et al. 2013).

5.5 Preventive and corrective mechanisms for conflict resolution

Chapter VII of NFSA-2013 deals with the grievance redressal mechanism for PDS. The Act provides for putting in place an internal grievance redressal mechanism which may include:

1. Call centres, help lines, designation of nodal officers for grievance redressal, or such other mechanism as may be prescribed
2. The act also mandates that the State government shall appoint or designate for each district, an officer to be the District Grievance Redressal Officer (DGRO) for expeditious and effective redressal of grievances of the aggrieved persons in matters relating to distribution of entitled food grains or meals and to enforce the entitlements under the Act.
3. There is also a provision that every State Government shall constitute a State Food Commission for monitoring and review of implementation of the Act.

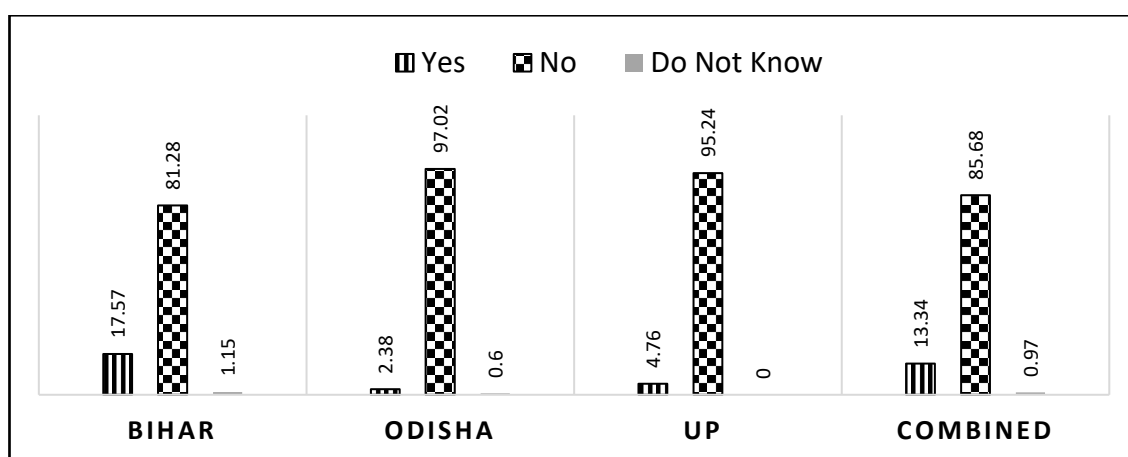
In both Bihar and Odisha, District Grievance Redressal Officers (DGROs) and State Food Commissions (SFCs) have been in place based on the recommendation of NFSA-2013⁵². Prior to NFSA-2013, according to the evaluation report of TPDS by NCAER (2015) even the Department of Food and Public Distribution, Government of India, had announced through the PDS Control Order, 2001 (GOI 2001) its intention of putting in place a well-functioning grievance redressal system in all states. The central government also directed state authorities to bring about awareness among rights-holders of the existence of a grievance redressal mechanism.

The Public Distribution System (Control) Order, 2001 requires state governments to include the following among the duties of the FPS owners. They need to display a notice at a prominent place in the FPS containing information about the authority for redressal of grievances with respect to quality and quantity of essential commodities under the PDS. The Order further empowers the state government to monitor the implementation of the PDS in the state as well as take necessary action against violations of its provisions by any person under the Essential Commodities Act, 1955. The Order also requires state governments to educate ration cardholders about their rights and privileges under the PDS (NCAER 2015).

⁵² <http://dfpd.nic.in/district-grievance-redressal-officer.htm>

The evidence from Chapter 4 shows that compromising of the entitlement is quite common particularly for certain sections. In the NFSA apart from the provisions for involvement of PRIs and affirmative action, a big element of governance change comprised the institution of a formal grievance redressal mechanism (discussed above). However, based on survey data, notwithstanding issues with the PDS, in the three states, a significant percentage (81 percent in Bihar, 97 percent in Odisha and 95 percent in EUP) reported not having experienced any conflict with the dealer (Figure 17).

Figure 17: Experience of conflict with dealer



Even based on gender segregated data, significant percentage of FHH also reported not having experienced conflict with the dealer. Similar results were observed across caste too. The intricacies of the engagement with the dealer and the conflicts therein are captured through qualitative data that goes into deeper aspects of the relationship between the dealer and the PDS rights-holders. Majority, especially in Bihar and EUP (both men and women of lower caste) reported conflict with the dealer but most of the times, these went unreported. Not reporting the conflict to the authorities concerned (example PRI or the grievance redressal unit for men and women of the lower caste) was normal.

There is a widespread fear in this group of coming under the “spot light” (see chapter 6, section 6.3). In addition, as validated by Mazumdar (2009) study in UP on PDS, majority do not complain or enter conflict with the dealer because of the strong nexus between the dealer and the influential people in the village. Hence, one of the fallouts of decentralization i.e. elite capture that Bardhan and Mookherjee (2002) refer to is very much at play in the context

of the PDS. The evaluation study by NCAER (2015) which examines Bihar among other states, also reiterates the nexus between the dealer and the *Mukhiya*. As per the report, although 49 percent in Bihar were aware of the monitoring system, it was of little use to them. The report outlines deeply entrenched collusion encompassing the FPS dealer, the village council and district-level supply offices.

Table 16: Local government and the resolution of the conflict

Did Mukhiya/Panchayat functionaries help you in resolving the conflict with the dealer?

	Bihar	Odisha	UP	Combined
Yes	22.54	77.38	30.95	45.90
No	74.41	20.83	64.29	51.49
Do Not Know	3.05	1.79	4.76	2.61

Moreover, in my study, those who happened to complain of the conflict with the dealer to the *Mukhiya*, in both Bihar and EUP a significant percentage of respondents reported that the *Mukhiya* or the *Panchayat* functionaries did nothing to resolve the issue. In fact, the combined data of the three states show that nearly 51 percent of the respondents reported that their conflict with the dealer was not resolved by the *Mukhiya*. Odisha where PRI seems to be more responsive, 77 percent reported having their conflict with the dealer being resolved by the *Mukhiya* (Table 16).

5.6 PDS inspection

One of the preventive elements against mis-governance of PDS is the system of inspection. There are different possible agencies for inspection i.e. the *Mukhiya* or authorized government inspectors. The inspections can be for quantity delivered, quality of grains distributed or even for the day to day service delivery such as frequency of the opening of shops and the duration for which the PDS shop is kept open. Khera (2015) advocates going beyond the grain leakage problems and engaging with other second-generation issues of PDS (like quality of grains and regularity of supply)⁵³. Here I focus on monitoring and enforcement mechanisms in place for an effective delivery system (which will ensure right quality of grains, regularity of supply and plugging of leakages). Note that quality is comparatively less well observed and is often employed for latent discrimination.

⁵³ <http://www.livemint.com/Opinion/VlojQGHredhw6P4y2vTmcl/PDS-in-Bihar-The-road-ahead.html>

In principle, inspections can protect against malpractices in the PDS system. Khera (2011), examines case studies of Tamil Nadu and Chhattisgarh as ones that highlight the impacts of right monitoring and enforcement mechanisms in ensuring an effective PDS system. Similarly, Nagavarapu and Sekhri (2013) also highlight the importance of monitoring in PDS to curb black-marketing by the FPS dealers. One of the most cost-effective ways of enforcing monitoring in PDS is to have the *Mukhiyas* inspect the distribution of the PDS commodities.

Hence, I examine the question around the inspection of the PDS by the *Mukhiya*. The results do not come as a surprise: 69 percent of the respondents in both Bihar and EUP reported that the *Mukhiya* does not inspect the distribution of the PDS commodities. However, in the three states combined, a significant 58 percent of respondents reported that they witnessed inspections. This was driven by high numbers in Odisha where nearly 69 percent reported that the *Mukhiya* inspects the distribution of the PDS commodities (Figure 18). Similarly, when asked about the government functionaries inspecting the functioning of the PDS, around 49 percent in Bihar, 48 percent in EUP, 34 percent in Odisha and around 45 percent across the combined three states reported that the government functionaries do not inspect the PDS (Figure 19).

Figure 18: Does *Mukhiya* inspect FPS?

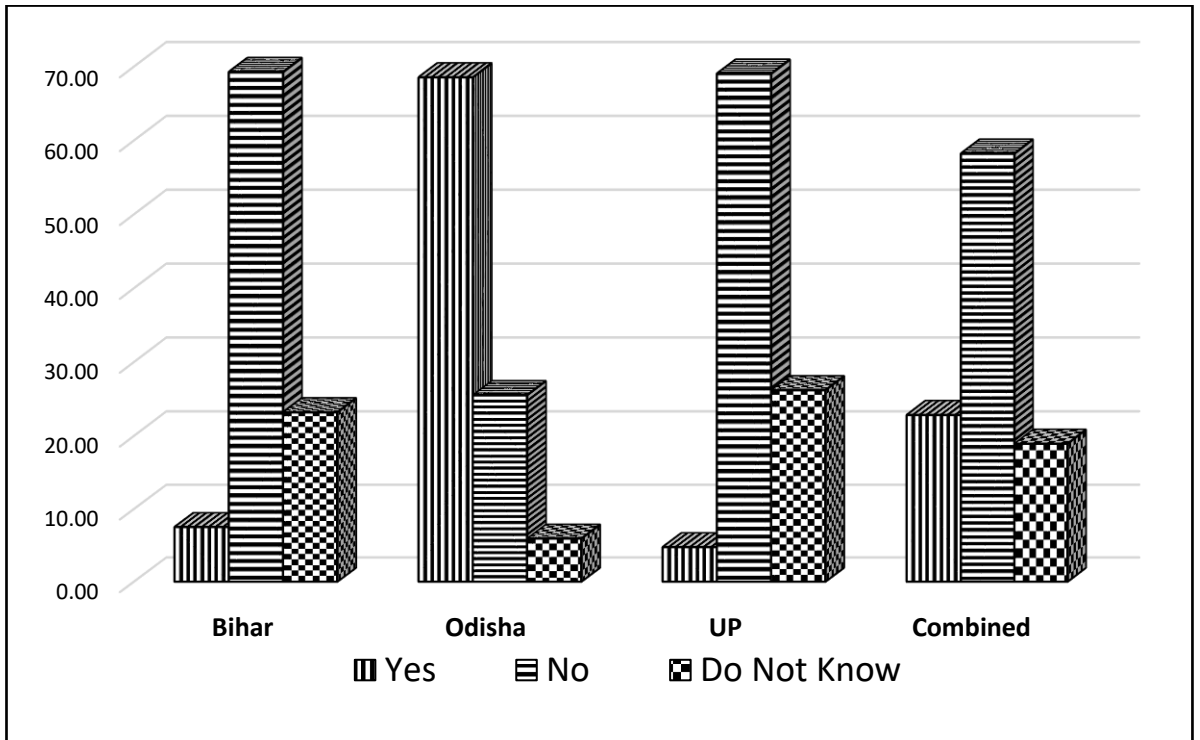
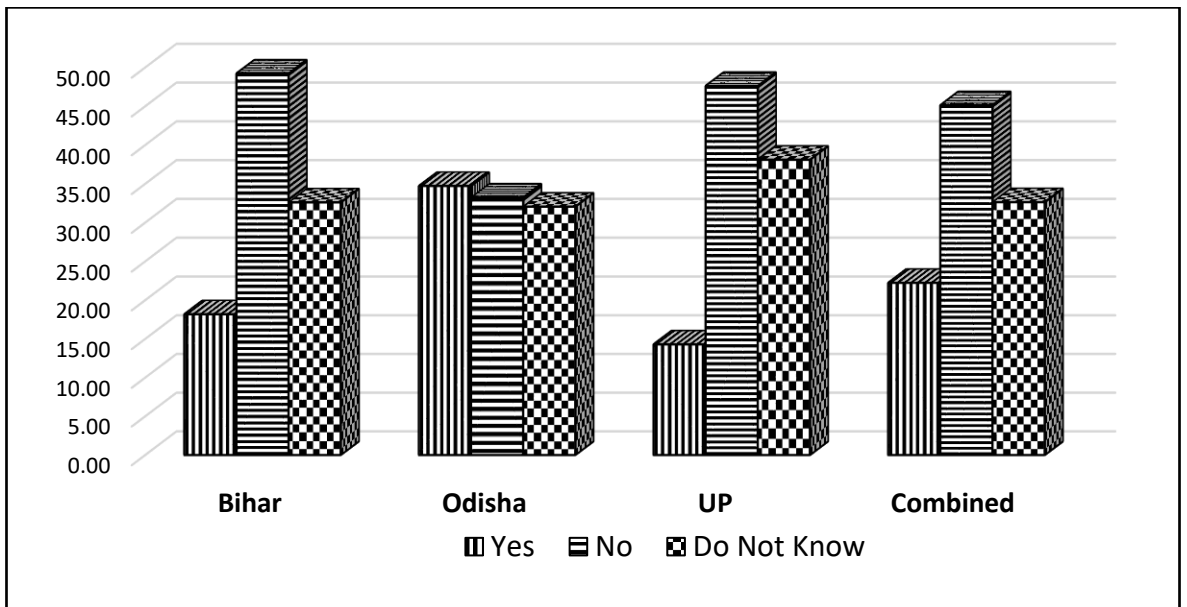


Figure 19: Do government functionaries inspect PDS functioning



5.7 Overall rating of PDS as a function of governance factors- Evidence from bivariate ordered probit

With governance critical in determining the experiences related to the PDS that would ultimately bear on the needs and preferences of the households, I look at the association between the subjective ranking of the PDS as a function of a marker of governance. Hence, I focus on the perception that elections have improved accountability and functioning of the PDS and assess its association with the evaluation of the PDS by the respondent. I focus on two ordered responses about the PDS. First relates to the shopping experience in the PDS (with issues related to weighing, pricing, quality) and the second one relates to ranking based on timeliness of delivery in the PDS (captured in terms of frequency of opening of shops, timely availability of grains and waiting time).

In the models used above for ranking of the PDS, the assumption would be that ranking on different attributes related to the PDS have no association with each other. Clearly, this assumption might not hold true. Ranking on different attributes could feed into each other and could therefore be highly dependent. A truer model for assessment of the PDS should allow for dependency. I thus extend the earlier models by using a bivariate ordered probit model. This model allows for a positive or negative correlation in the respective error terms of the underlying response models. If there is a positive correlation across equations', it implies that unobserved variables are influencing both the responses in the same direction and vice versa.

Results for the estimation of the bivariate ordered probit models are presented in Table 17. Importantly, households that think that political process and governance changes have improved outcomes for the rights-holders, also seem to give a higher rank to the PDS in terms of different attributes. The ranking equations for both the attributes, given the importance of local heterogeneity includes village fixed effects where relative to the base village i.e. B1 in Bihar, there are both villages associated with higher ranking as well as lower rankings. Also, I do not find any caste effects in the ranking except that general caste seem to be associated with low ranking of PDS in terms of timeliness. There are however significant gender effects with female headed households tending to rank shopping

experience in the PDS lower. Marginal effects of the bivariate ordered probit models are not reported but are available upon request.

Table 17: Ranking of attributes related to PDS

Bivariate ordered probit regressions		
VARIABLES	Ranking of the PDS experience	Ranking of the PDS experience (with village fixed effects)
Female headed household	-0.240** (0.110)	-0.0751 (0.114)
Have elections improved accountability of panchayat (1=yes, 0=no)	0.150* (0.0849)	0.179** (0.0712)
Total land holding size (in acres)	0.0126 (0.0189)	-0.00452 (0.0160)
Schedule caste	0.156 (0.357)	0.0189 (0.154)
Schedule tribe	-0.0859 (0.367)	-0.123 (0.168)
Other backward caste	-0.0588 (0.435)	-0.148 (0.129)
General	-0.573 (0.455)	-0.505** (0.219)
Household size	-0.00873 (0.0202)	0.0160 (0.0220)
FPS availability in the same village	0.113 (0.156)	0.148 (0.143)
Money paid for ration card	-0.00755 (0.0168)	0.0198 (0.0133)
Informed about right quantity in the PDS	-0.166 (0.146)	0.0554 (0.118)
Informed about right price in the PDS	-0.109 (0.157)	-0.198 (0.135)
Same social group with dealer	-0.203 (0.140)	-0.160 (0.208)
Village fixed effects	No	Yes
Clustered standard errors at village level	yes	yes
Constant		
Observations	848	848

5.8 Summary

This chapter has discussed the role of governance of the PDS system focusing on issues of decentralization and affirmative action as well as issues of accountability based on gender as well as social identity. There can be no doubt that these governance changes have potentially first order effects and can play an important role in the functioning of PDS' delivery mechanisms. However, the evidence from both quantitative as well as qualitative analysis suggest that these reforms need not guarantee more gender-based or caste-based equitable outcomes in rural service provision, including in the PDS. I look at the issue of governance at broad level i.e. local government as well as in the specific case of the PDS itself i.e. its delivery mechanisms, grievance redressals, eligibility protocols and other preventive and corrective systems.

The analysis in this chapter highlights the role of socio-economic-political factors in conjunction with long lasting institutions that constrain effective local governance and rural service provision in systems such as PDS. These factors seem to play a role beyond the institution of decentralization and political/institutional representation of the weaker sections.

To effectively meet the needs and preferences of the intended rights-holders, there seems to be a need to go beyond broad changes such as decentralization and affirmative action. There could be a governance need for more targeted programmes and the strengthening of corrective institutions. The results indicate that as part of governance, though applicable in few cases but wherever there is inspection i.e. monitoring of programmes the experiences and trust in the PDS tend to be better. With the potential for arbitrage by the dealer going up significantly after the NFSA, it has thrown up a big challenge for governance in terms of the need for greater and closer scrutiny of the PDS system. Also, evidence shows that awareness about mandated quantity and prices matters in experiences and perceptions.

Hence, as one part of governance, creating a knowledge base and disseminating information to households could be very important. This is exemplified by the example of Chhattisgarh where the system is credited with manifold increases in functioning of the PDS. One big element of the governance change has been to make the rights-holders more informed including about grievance redressal and monitoring (Chakrabarti et al. 2016).

Given that analysis shows the importance of local heterogeneity with different contextual factors being important, from a governance perspective, different portfolios of strategies might be needed. Common to all strategies should be sensitivity to local social conditions and the significant potential of elite capture.

Chapter 6: Coping strategies, a case of entitlement fetching versus entitlement snatching

In this chapter, I examine the various determinants of the effectiveness of the coping strategies that the rights-holders generally adopt, to secure their entitlement from PDS in terms of quantity and quality of the products as well as of delivery services. The need for coping in the context of PDS emerges because of entitlement failure. In accessing entitlements there are both active entitlements snatching and reactive entitlement fetching which form part of the coping strategy (see Chapters 4 and 5). Towards this it is important to understand what do entitlements signify?

Sen (1984, pp. 497) defines entitlements as “the set of alternative commodity bundles that a person can command in a society using the totality of rights and opportunities that he or she faces.” Effectively, entitlements derive from legal rights rather than morality or human rights (Devereux 2001). Edkins (1996, pp. 559) points out that despite its normative connotation, entitlements “does not reflect in any sense a concept of the right to food. The author notes that the essence of the entitlement approach is to shift the focus from Malthus problem of too many people and too little food to the inability to acquire food.”

With the focus on entitlement as in Sen (1981), this chapter focuses on coping strategies that are aimed at mitigating entitlement failure that obviate access to food. In doing so, I draw attention to the strategies or mechanisms that are adopted based on political connectedness, economic status and social factors such as homophily (kinship) with the dealer or homophily with the agents in the local government such as the *sarpanch* (village head).

Apart from these, household characteristics such as family composition; how many young males, caste identity all play a role in determining the nature of the coping strategy, for example in whether to utilize the system of grievance redressal and in what form. Role of coping mechanism starts even before accessing the PDS in getting the identity cards. The process of getting identity cards that qualifies households for the benefits in the PDS is fraught with bureaucratic delays, corruption and misuse of power by the officials and the dealers. State government carries out the identification of the rights-holders. As discussed in chapter 2, the targeted public distribution system (TPDS) divided rights-holders into two categories: BPL and APL.

Further, *Antyodaya Anna Yojana* (AAY) was launched in December 2000 for the poorest among the BPL families comprising households with landless laborers, slum dwellers and daily wage earners or households belonging to backward caste. However, after NFSA 2013, there are now two main categories of entitlement-holders: *Antodaya Anna Yojana* (AAY) households or the poorest of the poor; and Priority Households (PHH), who hold BPL or NFS cards.

In effect, the various categorizations and the criteria used create power asymmetry and requires that households particularly from the weaker sections devise strategies to cope with the problems of identification. In accessing PDS or in getting delivery of services, collective strength is quite important. Hence, as part of the coping strategy I also examine the role and importance of collective action (for example organizational response with households getting together to secure rights or simply rallying with an NGO) versus individual response (possible owing to reasons such as not to come under the spotlight and therefore not registering formal complaints).

While the early literature on “coping strategies” against lack of adequate access to food reflected an assumption that strategic behavior is dominated by the search for food, later research found that consumption rationing is adopted as a common strategy (Devereux 2001). Evidence from many famines confirm that “coping strategies” during food crises centre on preventing asset depletion rather than with maintaining consumption levels. As a coping strategy, in the entitlement approach, decisions to ration food consumption, can be understood as attempts to manage the current endowment set, including food, to maximize the individual’s or household’s long-term entitlements (Sen 1981). Coping strategies involve this trade-off all the time. Hence, even in the case of access to the PDS, actions and strategies that bear on current entitlements do aim to maximize or protect household’s long-term entitlements.

Amid several different coping strategies, a simple one is merely the readiness for switching grains i.e. for example rice with wheat, even though rice is dearer with bigger wedge between PDS price and the open market price, the quality is invariably suboptimal for consumption (see chapter 7, section 7.2.3). Hence, even when the preferred grain is rice, there could be an uptake of wheat as a coping strategy if its quality is comparatively high. In other cases,

coping strategy comprises just building enough social capital with the dealer to secure subjective entitlements (as entitlements based on legal rights depend on the type of household) or by taking agreeable positions with the dealer even though the dealer might be doing things illegal or inappropriate. Hence, coping strategies comprise a complex web of trade-offs articulated at various levels and in different forms.

Based on extensive primary data, I look at the trade-offs in the adoption of coping strategies, for example short term benefits from seeking their entitlement vociferously resulting in possible losses over the long run. There also are trade-offs for example in terms of enhanced access to PDS and regularity of disbursement pitched against the quantity and quality of the grains accrued. Note that not raising voice or abstaining from opposition to compromises in entitlement or low quality of services delivery is itself a coping strategy in different contexts.

In this Chapter I focus on understanding the profile of coping strategies against entitlement snatching and the complex interactions among them. I also look at the choice of strategies or lack of it based on identities such as gender and caste. The strategies are also conditioned by experiences and the institutions that facilitate or hinder choices related to coping with the problems associated with access or quality of access.

6.1 Perspectives on coping mechanisms

Coping mechanisms comprise a collection of people's responses to declining food access and entitlement failures particularly when own food sources become insufficient. Such mechanisms are often dynamic and depend on the changing external environment within communities and households. Brahma and Keopet (2002, pp.39) state that "coping mechanisms are adaptive strategies in the face of adverse circumstances."

The assumption is that the problems of access and entitlements failure follow a familiar pattern, to which households and individual's earlier actions could serve as a reasonable guide for the future. The coping mechanisms are closely related to household characteristics like age and gender, resources and assets and depend heavily on the socio-economic status of the people, their social networks and connections with the relevant institutions. The coping mechanisms also depend on the vulnerabilities and capacities at an individual as well

as at the community level. Communities also mobilize when interests are commonly aligned, and free riding can be overcome to cope with entitlement snatching as it happens in several public programmes like the PDS (see section 6.5).

In the literature coping and adaptation have often been distinguished (see for example Alemayehu 2017). Coping relates mainly to strategies that are for the short term and immediate and is often driven by lack of alternatives. Adaptation in contrast pertains to the longer term and is often focused on finding alternatives. Coping may or may not be limited to alleviate the immediate problem. Adaptation goes beyond coping by trying to change the situation in a sustainable manner. In relation to the case of food access from the PDS, the distinction between the two is not clear and depends on the external environment (Davies 2016). What could be a mere coping strategy in one context might transform into adaptation depending on the external environment. Buying grains from the open market for example could be a coping strategy in an in-kind transfer system but could be adaptation if the system of food subsidy moves to a direct cash transfer.

Importantly, coping strategies are generally useful in the short term and may not necessarily bring a change in livelihoods that along with institutional changes (like political empowerment) can diminish their need over time. Also, coping strategies are effective depending on the size of entitlement snatching. Some strategies may become inadequate when the magnitude of entitlement failure is beyond the capacity of the community or the individual person to cope with.

6.1.1 Alternative frameworks for looking at coping strategies

Apart from the conceptualization of coping from the point of view of livelihood preservation (Nair et al. 2007; Rashid et al. 2006), there exist alternative concepts from different disciplines that deal with the responses. In this section, I outline how the coping mechanisms have been explained in disciplines like psychology and development.

In the specific context of developing countries, the neo-classical explanations where everyone is well informed, and rational and geared towards utility maximization may not hold, especially in the context of programmes like PDS. Here, an optimal response to

entitlement compromise would be to fight for it, revolt, and protest. The assumption is that individuals are rational and that in case of injustice or perception of loss, they would tend to revolt or protest. But within the bounds of individual rationality, this might not always be the case. Faced with entitlement snatching, individuals can come up with various coping mechanisms (Table 18). This is where the literature in psychology might help in understanding the individual approaches for coping.

One of the fundamental understanding of coping mechanism comes from clinical psychology in terms of the cognitive appraisal model. Lazarus and Folkman (1984), who have contributed substantially to psychological stress and coping processes define coping as a “process of constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person.”

The model “cognitive appraisal” is typically applied to situations where the stress is controllable, and the problem source is manageable (Lazarus and Folkman 1984). The model pays attention to coping as a mediator of stressful events (Zarafshani et al. 2005). The cognitive appraisal can be defined as “the process of categorizing an encounter, and its various facets, with respect to its significance for wellbeing” (Lazarus and Folkman 1984) and has been used to study diverse scenarios including drought-related stress among farmers. Coping from stress consists of three processes as follows:

- (i) primary appraisal – the process of perceiving a situation as a loss, a threat or an opportunity;
- (ii) secondary appraisal – the process of conceiving a potential response; and
- (iii) tertiary appraisal – the process of coping

Hence, from a psychology perspective, within the framework of my research, the way the rights-holders perceive their access and quality of access to the PDS and the way they cope can be categorized as:

- (i) emotion-oriented (primary appraisal),
- (ii) problem-oriented (secondary appraisal) or

- (iii) social support oriented (tertiary appraisal) (Lazarus and Folkman 1984 and Zarafshani et al. 2005)

For PDS to be meaningful, it is important to assess not only how rights-holders perceive the working of PDS, but also how they cope in situations when their entitlements are denied, or the quality of services is subpar. There are different responses including strategic inaction that characterize the landscape of coping mechanisms.

Though the framework from psychology has the potential to provide a fresh interdisciplinary perspective by providing the influence of individual psychological factors, this chapter also builds on the insights and premises of the various coping strategies used in the development literature like coping strategies in face of vulnerability, in livelihood and pressures due to seasonality.⁵⁴ I refer primarily to the strategies what Chambers, Longhurst and Pacey (1981) proposed for coping with seasonality to redress seasonal stress. The authors try to understand the interlinkages of seasonal deprivations and stress as they were experienced. Seasonal stress drives poor people into debt and dependence. The knowledge that there will be future seasonal crises constrains them to keep on good terms with their patrons. They are thus pushed seasonally into subordinate and dependent relationships in which they are open to exploitation. The poor are subordinated to the less poor and the weak to the strong. Chambers, Longhurst and Pacey (1981, pp.223) refer to it as “irreversible ratchets”.

Similarly, Blaikie and Brookfield (1987) use an approach called regional political ecology that defines land degradation as a social problem.⁵⁵ Though focused on land degradation, the emphasis on the social, economic and political conditions of the land users and managers i.e. the regional political ecology has important lessons for the drivers of access and quality of access in the PDS. The main message is that there are social causes that must be understood to address the socio-economic problems.

Hence, drawing from these two strategies, hush or noiselessness itself can be a conscious coping strategy. There are several underlying social factors/causes that can explain the state

⁵⁴ See for example IDS bulletin 1986 that focusses how seasonality affects poor people, and how they cope and respond to such seasonal stress

⁵⁵ Also see Wisner et al. (1994; Wisner et al. 2004, pp.4) argue that humanitarian crises/Disaster are often 'the product of social, political and economic environments, “as distinct from the natural environment”

of inactivity or silence even when entitlements are being denied or compromised. First, there is path dependent despondency which can be explained as a struggle amid unequal power relationship. If clamor historically has not produced any change then rights-holders through their own experience or by observing peers or other groups get despondent and inaction and silence turns out to be the best response. This despondency is often demarcated by identities such as gender, caste and class. I discuss these in detail below.

The second underlying factor is rationality where individuals compare the net payoffs between action and inaction and/or between protest and silence. Note that coping strategies across the distinct categories are not mutually exclusive. Caste or other identity-based expectations that can lead to inaction or silence can also account for the factors limiting active resistance. Just as belonging to lower caste groups is associated with low expectations about their grievances being addressed and find it futile to raise their voice, they also might feel there being no point in using grievance redressal mechanisms.

Table 18 summarizes the different categories of coping identified/deducted from the qualitative interviews. From my primary data, given the heterogeneity, respondents generally used combinations of these coping strategies that can be classified under the three classifications of “problem-oriented, social support-seeking and emotion-oriented” as defined by Lazarus and Folkman (1984). The adoption of these coping strategies reveals important patterns of how rights-holders respond to entitlement snatching, in case of PDS. Heterogeneity in terms of who follows which of the strategies, who can make it effective and what types of impacts the strategies have can vary based on gender, caste and class. Within the broad rubric of these coping strategies, the threshold at which they are adopted is driven by heterogeneity (may differ across gender, caste and class): for example, SC/ST may have a higher threshold than the upper caste or women may have a higher threshold than men. These are discussed in the following sub-sections.

Table 18 Broad list of coping mechanism used by the community in accessing PDS

<i>List</i>	<i>Coping mechanism</i>
	<i><u>Inaction and silence (emotion-oriented)</u></i>
	<i>Underlying factors</i>
	1. Caste or other identity driven despondency
	2. Rationalisation
	3. Strategic waiting and free riding
	4. Reputational costs of action
	<i><u>Trading off benefits (problem-oriented)</u></i>
	<i>Underlying factors</i>
	1. Salience of regularity of disbursement
	2. Quality versus quantity trade offs
	3. Trade-offs across grains
	4. Trade-offs across variety of grains
	<i><u>Active resistance and proactive choices and responses (social support-oriented)</u></i>
	<i>Mechanisms</i>
	1. Individual action including quid pro quo
	2. Collective action
	3. Utilization of institutional mechanisms for grievance redressal
	4. Political responses when possible

Note: The list noted here are primarily drawn/deducted from the qualitative interviews

6.2 Inaction as a coping strategy

In accessing PDS and securing a minimum quality of service, being passive and being accommodating is often a common coping strategy against the threats of entitlement snatching or it being compromised or even the quality of services being subpar. Table 19 shows that the incidence of households facing issues in accessing PDS is quite high at 40 percent. Yet, in terms of active response among those who experienced an issue in accessing PDS, only 28 percent approached the *panchayat*. If not approaching the *panchayat*, could it be that some other mechanisms were employed. Expectedly the survey results show that other avenues were also not used for example approaching the Block Development Agency or the officers there.

Table 20 presents the responses about any outstanding grievances regarding PDS across states. The response to this question is driven also by awareness as well as feasibility of approaching the mechanism. Even though Odisha is the better performing states in terms of PDS, the awareness about the grievance and its redressal are also comparatively high.

Importantly, not a significant difference exists in terms of outstanding grievances between male headed and female headed households.

Table 19: Incidence of issues in getting entitlements (Reported in the survey)

Did you experience any problem in accessing PDS or getting your entitlement?			
	Freq.	Percent	Cumulative
Yes	599	40.15	40.15
No	796	53.35	93.50
Do not know	97	6.50	100.00
Total	1492	100	

Table 20: Incidence of grievances other than getting entitlements (quality of service)

Do you have any grievances?

	Bihar	Odisha	UP	Combined
Yes	38.05	40.6	28.66	37.30
No	61.95	59.4	71.34	62.7

In addition, there are sizable cases of direct conflict with the dealer. The direct conflict refers to disagreement where the dealer exercised his power to not provide the mandated quantity or charge the regulated price. Across the three states about 13 percent households had a direct conflict with the dealer (See Chapter 5, figure16). In Bihar for example, up to 18 percent of the rights-holders experienced direct conflict with the dealer. The incidence is higher for male headed households relative to female headed households. Yet, with grievances and even direct conflict, a significant majority of households do not lodge complaints and maintain status quo. There are several factors that rationalize such a strategy of inaction. Those I discuss below.

6. 2.1 Dormancy because of unequal power relationship

Caste or other identity-based despondency characterized by helplessness was among more emotion-focused coping strategies. In terms of responses to entitlement snatching, the coping

strategies were characterized by dormancy. Though similar trends were found in all three states, it was most pronounced in the cases of Bihar and Eastern Uttar Pradesh. Interestingly most of the SC/OBC respondents (both men and women) in Bihar villages do not air their grievances to the higher officials. Such stances are usually conditioned by past experiences of how the grievance redressal system works, and because of continuous updating of their beliefs about whether complaints were ever yielding any results.

On balance, it seems the ability to lodge a complaint is what determines the choices for expressing grievance. Hence while the 14 percent of female headed scheduled caste households have expressed grievance, the fraction is 3 percentage points higher for male headed scheduled caste households across the three states. This pattern of male headed households having a greater propensity to report holds across all castes. Interestingly FHH among upper castes have a higher fraction of households seeking grievance redressal than the MHH (Table 21). Since the state machinery is conspicuous by its absence, it leads to the kind of dormancy more so for woman headed households and lower caste households.

Table 21: Proportion trying to express grievance

Have you ever tried to express your grievances related to PDS?

	Bihar	Odisha	UP	Combined
Yes	15.61	9.5	4.58	12.92
MHH/FHH-Yes	16.38/14.24	9.64/8.77	6.25/0	13.27/12.11
MHH/FHH (SC)-Yes	20.42/13.33	11.27/18.75	9.09/0.00	16.96/14.29
MHH/FHH (ST)-Yes	17.46/18.42	10.73/0.00	0.00/0.00	12.50/10.29
MHH/FHH (OBC)-Yes	16.45/15.10	0.00/0.00	6.19/0.00	13.02/12.45
MHH/FHH (GEN)-Yes	4.62/7.89	0.00/0.00	0.00/0.00	4.35/7.85

MHH-Male headed households; FHH-Female headed households; SC/ST-Scheduled caste/Scheduled tribe; OBC-Other backward class; GEN-General

The evidence on dormancy in expressing grievances because of past experiences is quite widespread. For example, in Bihar-Village-B1 where both the dealer and the *Mukhiya* are *Bhumiyaars* (higher caste), a male SC respondent, seemingly very well versed with this system said, “*I have complained to the District Magistrate many times. I have also used the toll-free number printed on the coupon for grievance redressal to lodge a complaint, but nothing happens.*” While another male SC respondent, lamenting the lack of grievance redressal in his village, summed up his observation as follows: “*I had gone to the block and had complained once, but nothing happens.*” “*Bribery ("ghuskhori") is very much prevalent*

here, right from the Mukhiya to the dealer, to everybody in this chain. Who will complain, nobody will do ("koi bole na"). In our village, the dealer is a Bhumiyaar, there are 500 Bhumiyaar households, and they are a large group. We are scared."

Another respondent from the same village added that the "*the dealer is a Bhumiyaar, so also is the Mukhiya. The Mukhiya controls everything and the dealer and Mukhiya are hand-in-glove*". While this may be true, and understandably this is a deterrent for those who are already low in the social ladder, my observation has been that, though there is no overt discrimination between the upper caste and the lower caste, certainly there is a bias in terms of according more value to the upper caste. Concealed discrimination does exist, and access is largely conditioned by long term past experiences that translate into despondency. The oft-repeated phrase "*we are lower caste*" seems to have come up many times in my interviews in villages of Bihar. Some of which is given below:

*"We are **lower caste**. We do not complain. Upper caste like Bhumiyaars complain ("Bhumiyaar bolte hain"). We do not want to enter any dispute, we do not indulge in violence ("maar-pit' nahi karte")."*

*"We do not complain, we are **lower caste**. We cannot speak up. We never complained. Who will speak up? Here might is right ("jiski lathi uski bhains"). "Bhumiyaar if they come while we are waiting for our turn, they are given preference. **Who will object? We cannot since we are lower caste**. No use telling."*

"We do not complain. Those who fight, they do. We are illiterate, we fear the Bhumiyaars ("Bhumiyaar se darr lagta hai")."

The expressions by the respondents clearly point to the unequal power relations that capture the constraints emanating from local power relations. Problems in access are also perpetuated by how rights-holders feel they are treated by the dealer, which in turn reinforces their belief system regarding the issues related to compromises in their entitlement being addressed. Like most respondents in this village noted, "*Bhumiyaars are given preference. We keep sitting ('baithe raho'). We are scared to say anything ("darr lagta hai kahin kuch kah dete hain". When my son starts crying, I request him not to keep us waiting. At times, he obliges."*

6.2.2 Accepting practicality of alternatives as a coping mechanism

Further, as most allege, when the dealer is also of the upper caste as Village B1, he allows people of his own caste to “choose and pick better quality grains” (*Bhumiyaar ko chunne dete hai*). As one of the female respondents said, “My son goes to queue up for the ration, he reserves our turn to collect the ration but during that time if someone from upper caste comes, he would give them preference”. Also, the dealer keeps the shop open only for few days, it gets very “crowded”, and there is “always a fight for ration”. This is further aggravated when the dealer “makes them wait at times for up to four hours” if the upper caste come to collect their ration during that time. “He will tell us to sit quietly and wait”, they opined.

Several of the interviewees expressed their lack of trust for the dealer emphasizing that he only caters to people who are powerful (“*dabang*”). One who is powerful gets more and good quality grains. He is also partial to people he presumes are potential trouble. The dealer strategically disburses grains with a certain regularity sometimes and then he would cease disbursement for 2-3 months, the oft-repeated alibi being the grains were not supplied from the state food corporation.

6.2.3 Rationalising situations by comparing scenarios as a coping mechanism

Some rights-holders also rationalize their position by expressing that “*everywhere it is the same situation.*” In effect, the generality of the situation acts as a driver for inaction. Case in point is Village B1, where both the dealer and *Mukhiya* are from *Bhumiyaar* community. Some of the respondents opined that generically no dealer is good, independent of the other power relationships involving the local government such as the *Mukhiya*. Like other dealers, he too “shouts at women”, “mixes the good quality rice with the bad ones. Rights-holders do recognize the idiosyncratic elements in their case like quality of rice being somewhat exceptionally low, “What do we do with that rice. Cannot even sell off”. If at all they raised objection i.e. chose a proactive coping strategy, the dealer would either close the shop or

would stop the ration for a while. The message was terse *“If you wish to take this, take, or otherwise, just leave it.”*

The essence of rationalization by comparing scenarios is that there does not exist a critical mass of cases that could motivate individuals or groups to break the mould. Also, from the point of view of coping mechanism, the lack of outside option seems quite pertinent.

The rights-holders have little option outside of PDS, shifting the bargaining power significantly in favor of the dealer. If the counterfactual were delivery mechanisms such as a universal coupon system that worked in PDS (different outlets) as well as open market outlets, that could limit the power of the dealers significantly and a simple coping strategy would be to junk the dealer who created problems for them.

In rationalizing by comparing scenarios as a coping strategy, the comparison could be across dealers at a point in time as well as over time. In the same village, conditioned by the bad experiences of the earlier dealer who also was from an upper caste, some respondents seemed comparatively considerate towards the present dealer. The dealer has been in this post for long and is thus an old acquaintance in the village, a modicum of good behavior was duly recognized and lodging a complaint against him was not considered optimal.

In other places under NFSA, wheat in principle must be supplied to eligible households at Rs 2/kg, and rice at Rs 3/kg. The field observations showed that generally the dealers would charge higher prices by up to rupees 1 or 2 per kg of the grain. Yet, from the surveys, a general view was that since everybody pays the same amount as asked by the dealer, this is the norm and could not be contested. Given the social relations there seems to be a payoff from being conformist (i.e. comply with what the others are doing). Qualitative study showed a persistent pattern of social acceptability of this level of corruption. Given the boundaries that social relations frame, there seems to be a general tendency not to question the dealer for the fear of coming under the spotlight as a trouble maker. The power relations (Kabeer 1994) inhibit most households from questioning about their entitlements even though they are aware of them being compromised. In case of PDS, this becomes more pronounced and acceptable by the claimant because in general going to the PDS shop for getting ration for home is a women’s job particularly amongst the lower caste households. The aspects of patriarchy results in certain structural and symbolic inequalities between women and men

and it is often more difficult for women to raise issues related to entitlement snatching (Joshi 2011).

Moreover, the rationalization as a coping strategy seemed to be at play in case of UP villages because of the general perception that corruption in the system was more of a norm than an exception, which was based on experience from other cases like housing loan that the government had started, where it was a norm to pay the *pradhan* certain amount of commission to get the loan sanctioned.

6.3 Trading off benefits

Poor women especially from certain social groups though often excluded from formal allocations of resources, tend to draw on other resources such as networks of family and friends to manage their access to food. Often, poor have access to resources including entitlements through social relationships based on patronage and dependency, where they must trade in their autonomy in return for security.

In this section, I highlight not only the unequal power relationships in the bargaining processes, but also the cultural norms and hidden negotiations that women draw upon to have access to resources, in this case with the PDS. Women for example devised their own coping strategies particularly in Bihar. Either they would collect their grains and return without making any confrontation about the quantity and quality, in other cases they would keep clear and send men folk to collect PDS grains.

The common belief and understanding seems to be that when men go, the dealer might allow them to choose the grain sack while with lower caste women, he would never do so. This was certainly the case in Village B1. In this village as an endorsement, one of the men, proudly said, "*The dealer fears us*". Even men would devise their own coping strategies to keep the dealer accountable. Like for example, a male rights-holder would keep a photocopy of the ration card, whenever the dealer will ask for keeping the card, he would surrender and keep the photocopy with himself. There indeed are costs involved in having the men go to fetch rations instead of women including loss of wages, but that cost could be traded for the benefits of getting the ration, in time, with better price, higher quantity and better quality.

6.3.1 Trading off benefits: Dealer's good behavior and regularity of disbursement

In the same village B1, in fact some respondents (both men and women, and of all castes) expressed support for the dealer. The response specifically in terms of both quantity as well as quality of rice and wheat was that it was sufficient and adequate for them. They rationalized the supply of some inferior quality grains in terms of its rarity stating that it cannot be the dealer's fault. It could have diminished in quality perhaps in storage.

Importantly, this favorable stance was despite the lack of awareness either about the right price and/or quantity as mandated. This is particularly salient given that most households comprised daily wage laborer involved in activities like road and house construction or work in brick kilns. In the same village B1, for example, the dealer (who was of the upper caste) was generally perceived as a good man in comparison to the other dealers. Hence, the perception of entitlement and quality of service needs to be assessed in relation to the counterfactual i.e. of other dealer or subjective benchmarking of one's experience in relation to other dealers.

There are attributes in the PDS delivery system that bear disproportionately on the assessment of PDS. The basis for overall positive valuation of the PDS was often driven by regularity in the disbursement of grains which weighed over compromises in quality. Additionally, in trading off benefits, some facts like the PDS shop being in the same village was quite salient particularly for women. If one were to complain, it is quite possible that that they might assign another dealer who might operate the PDS shop from another village. The distance is more of a deterrent than less quantity of grains. At least in the present scenario they can access the information for the date of disbursement of the grains since the dealer operates from the same village.

Respondents in general argued that they were accommodating on quality and paying a slightly higher price because "*har mahina toh deta hai*" (he disburses every month). Also, the price wedge being high between market and PDS even though higher than mandated was

a source of comfort. The regularity of disbursement as a factor towards positive views about the dealer was also in case of tribal villages in Odisha.

Alongside there is a feeling as well that the operating costs and reasonable profit margins of the dealer cannot be covered or realized at the designated price. The stance was that for FPS to be viable, some mark ups on price and mark downs in quantity were needed. In terms of coping, there implicitly is a tolerable margin of corruption.

Related stories were recounted from villages of Odisha too; of how the good behavior of the dealer and regularity in disbursement were grounds enough for not lodging a complaint by the rights-holders, despite sub optimal quality of rice at a higher price than the regulated one. In the case of Village O2 which is fairly a homogenous community with majority from the ST community, the present dealer who belongs to OBC, and happens to be the nephew of the present female *sarpanch* (of OBC category) was selected for PDS dealership. According to the respondents, in the entire *gram panchayat*, he qualified for the post because he was trained in handling the basics of a computer. Though he is related to the present *sarpanch* but owing to his qualification in handling basic computation he got selected for the post.

In another village of Odisha, Village O4, besides their complaints for ration card, majority of the card holders seemed more concerned about their kerosene oil entitlement. In Odisha villages, as per the new NFSA card, the column for kerosene card has been left vacant, giving the dealer a greater scope for arbitrage since he does not have to record how much he disbursed to the rights-holders' card. As of now the kerosene dealer, who is from an upper caste (*Brahmin*), and has been distributing oil for the past 15 years in this village, has been engaged in several malpractices. Yet there is a pecking order in preference where getting quota of kerosene is the benefit that households are willing to trade off in terms of coping with the compromises in entitlement of other commodities. In the surveyed Odisha villages, the rights-holders seemed much agitated about the quantity of kerosene oil, despite their houses having access to electricity. It was observed that the need for more kerosene oil was also because it was used to run irrigation pumps instead of diesel which is way costlier than kerosene.

Respondents said that invariably there would be fights with him for the right amount and the price he charged. With no column for kerosene oil, he distributes oil as per his choice. Being

from the upper caste, his connections with block officials, made him continue in this position for long. It was generally observed that most respondents complained about the increased black-marketing of kerosene oil. However, one respondent said that he had complained to the BDO against the kerosene dealer, post which an inspection officer had also come to the village for verification but when they inquired about it from the villagers, none came forward. Events like these lead to the dormancy and strategic waiting until a critical mass appears and the person does not stand out to be spotted. They said they were scared to come under the spot light: “*jadi complain karibu, kaliku amara bhi ration band hei jiba*” (“we are afraid if we complain our names will be removed from the beneficiary list”).

6.4 Regression analysis for expression of grievances accounting for sample selection based on existing issues with PDS

Table 22 present regression results for accessing the formal grievance redressal systems as a coping mechanism. As discussed above what stands out in the coping mechanism is extremely limited utilization of the grievance redressal systems despite its institution in the NFSA and data which shows that over 40 percent of the respondents had some issue with the PDS. These individuals/households, in a well-functioning system should be utilizing the instituted grievance redressal system.

The regressand is the binary variable whether the grievances were brought forward to the relevant authority (1=yes, 0 if not). The main variables of interest in this regression are gender (FHH), caste and class indicators. In addition, I assess whether information leading to awareness about the PDS system and entitlements leads to better utilization of the grievance redressal system.

The regression results on marginal effects from a simple probit regression in Table 22 (the specifications are presented accounting for village fixed effects and accounting for sample selection) show no significant association with most covariates indicating that lack of utilization of the grievance redressal mechanism is quite generic. The only variables which seem to be significantly associated with formal expression of grievances are household size and expectedly the occurrence of a direct conflict with the dealer. Importantly, awareness

matters. Those who are comparatively aware about prices and quantities are also more likely to approach the formal or quasi formal grievance redressal mechanisms.

Without accounting for sample selection, village level observed, and unobserved heterogeneity is only moderately important. The sample selection arises because the set of rights-holders who end up approaching grievance redressal need to have some grievance in the first place. The selection of the sample could be due to several observed and unobserved characteristics. The sample containing complainants is not a random sample but selected based on existence of grievance. Only when there is an issue would there be an incentive to come forward for expressing grievance.

In the results presented in Table 22, I employ Heckman correction to account for sample selection. With Bihar-Village B1 as the reference village around 5 villages have a greater incidence of formal expression of grievance by the respondent households while in case of 4 villages the incidence is lower. In implementing the Heckman regressions, it is important to have at least one exclusion variable, one that is associated with response that there is/are issues being faced with the PDS but is not associated with approaching the grievance redressal mechanism. It is extremely difficult to find such an exclusion variable, all variables that relate to existence of issues with the PDS are also likely to be associated with approaching the grievance redressal mechanism.

I employ the hypothetical preferences regarding different facets of the PDS system as exclusion variables in the first stage of Heckit estimation. The intuition is that the revealed preference for different facets of the PDS reflects broadly their unhappiness with the current system. If for example, the households expressed a preference for exclusion criteria as a selection mechanism in the PDS, it could very well be a function of having faced issues in the PDS that is based on inclusion criteria. These rights-holders are more likely to express grievance. The results from the Heckman specifications are presented in Table 22, first without village fixed effects and then with the inclusion of those fixed effects.

Accounting for sample selection and village level characteristics, importantly FHHs seem more likely to bring up their grievances. This could be since FHHs do not have the same capacity to cope through other social networks and this could be their last resort. With or without accounting for sample selection, I do not find any significant difference based on

caste affiliation. Yet, after controlling for other characteristics, I find better off households in terms of land size and non-food expenditure (the class indicators) less likely to have issues but conditional on facing issues are more likely to bring it up for redressal. In terms of the exclusion criteria, those households preferring exclusion are less likely to face issues in the PDS. This is in line with my qualitative findings where those wary of exclusion criteria as a selection mechanism were more likely to have faced problems in access like getting their ration cards (see Chapter 7, section 7.7).

Table 22: Expression of grievance as a coping strategy: Accounting for selection (Heckit estimation)

VARIABLES	Express grievance (1=yes, 0=No)	Issues in pds access	Mills	Express grievance (1=yes, 0=No)	Issues in PDS access	mills
Female headed household	0.318** (0.125)	-0.405 (0.266)		0.236** (0.104)	-0.375 (0.317)	
Schedule caste	0.274** (0.118)	0.444** (0.222)		0.145 (0.114)	0.341 (0.289)	
Schedule tribe	0.137 (0.405)	-0.583 (0.724)		0.211 (0.355)	0.168 (1.105)	
Other backward caste	0.108 (0.0972)	0.323* (0.186)		0.0341 (0.0915)	0.157 (0.235)	
BPL status	-0.0744 (0.0628)	-0.0350 (0.131)		-0.0704 (0.0540)	0.148 (0.153)	
Years lived in village	-0.00159 (0.00197)	-0.0129*** (0.00472)		-0.00232 (0.00161)	-0.0122** (0.00535)	
Household size	0.00891 (0.0131)	-0.0380 (0.0270)		0.00281 (0.0123)	-0.0650** (0.0319)	
FPS availability in their village	-0.0448 (0.180)	0.642** (0.309)		0.0159 (0.173)	0.619* (0.372)	
Months that got PDS rice	-0.00191 (0.0320)	-0.108 (0.0814)		-0.00550 (0.0272)	-0.176* (0.0917)	
Months that got PDS wheat	0.00274 (0.0277)	-0.0651 (0.0681)		-0.0279 (0.0236)	-0.0627 (0.0726)	
Get kerosene (yes=1, No=0)	-0.0137 (0.136)	-0.0343 (0.293)		0.0110 (0.119)	-0.250 (0.322)	
Homophily with dealer	0.270*** (0.0748)	-0.511*** (0.147)		0.224*** (0.0621)	-0.405** (0.168)	
Electronic balance in FPS	-0.172* (0.0936)	-0.237 (0.185)		-0.434*** (0.0954)	-0.128 (0.340)	
Monthly non-food expenditure	2.77e-06 (3.46e-06)	4.78e-06 (2.94e-06)		3.83e-06 (4.18e-06)	2.34e-05*** (4.59e-06)	

landholding size (in acre)	0.0253***	-0.0300**	0.0120*	-0.00993
	(0.00709)	(0.0143)	(0.00630)	(0.0172)
Any migrant (yes=1, 0=No)	-0.180	0.263	-0.175	0.170
	(0.138)	(0.284)	(0.117)	(0.330)
Caste discrimination (1 if faced in PDS, 0 if no)	-0.196	-0.0314	-0.123	0.375
	(0.124)	(0.234)	(0.114)	(0.324)
Gender based discrimination (1 if faced in the PDS, 0 if no)	0.0438	-0.497*	-0.133	-0.469
	(0.153)	(0.283)	(0.137)	(0.326)
Village fixed effect	No	No	Yes	Yes
Age		0.0118*		0.0125*
		(0.006)		(0.00709)
Prefer exclusion criteria (1 if yes, 0 if no)		-0.588***		-0.543***
		(0.165)		(0.186)
Does Mukhiya inspect PDS		0.138		-0.0706
		(0.399)		(0.428)
Conflict with dealer (1 if yes, 0 if no)		0.974***		0.749***
		(0.198)		(0.222)
Willing to substitute rice for pulses		0.0147		0.0364
		(0.157)		(0.195)
Lambda			-0.33***	-0.04
			(0.11)	(0.1)
_Ivillage_58				-10.34
				(0)
Constant	0.297	0.865	0.766*	0.377
	(0.279)	(0.634)	(0.422)	(1.059)
Observations	546	546	546	546
Standard errors in parentheses				
*** p<0.01, ** p<0.05, * p<0.1				

6.5 Active forms of Resistance

Amongst the diverse perspectives around their experience in accessing PDS, the issues that seemed to surface quite frequently is a lack of unity amongst the lower caste which primarily emanates from their past experiences. *Bhumiyaar*/upper caste, though have infighting amongst them, yet have unity when pitted against other castes. This was also something that I observed particularly in the Bihar Village B2, where during marriages and other social occasions, both the fighting *Bhumiyaars* came together to celebrate. Contingent unity amongst the *Bhumiyaars* is a matter of pride for them as they commonly realize the potential benefits of securing their entitlements. As for the coping strategies, the effective unity amongst upper castes limits the coping strategies of the weaker sections. In a comparative perspective, given their expectation, theirs is a weaker coalition and seems to be lacking efforts supporting group interest.

Consider again the case of Village B1. The power relations between the *Bhumiyaar-Mukhiya* and the SC/OBC rights-holders seemed to bear out more than the issues with *Bhumiyaar-dealer*. According to the respondents in my survey, the *Bhumiyaar-Mukhiya*, apparently treated all castes equally overtly, because of which he was voted to power, it was also felt that he wielded significant power on the dealer. Observations by the respondents (of all castes) in this same village showed that those closer to the *Mukhiya* took home more ration than others. Even if they miss it when it is being distributed, they will specially go to the dealer's house to take their share. Even the *gram sabha*-ward members (of higher caste), behave the same way, alleged some of the respondents.

Focusing on the *gram sabha* ward members, while the upper caste members could stake a claim to their PDS grains, the lower caste ward members feel that they do not have power over the dealer. Even otherwise they feel the ward members as such have no say in the local governance of the village. The only person who mattered is the *Mukhiya*, and few of his coterie (primarily from the upper caste). In such a scenario, when the dealer is not answerable to the ward members, coping strategy comprises identifying the right node to tackle the problem – in this case the *Mukhiya* and try to get his/her support. The on-paper nodes for services like ward members are ineffective and liaising with them does not make for an effective coping strategy.

Note that most respondents felt that the caste of the dealer does not matter and that there is no overt discrimination in the village as such, but it is nuanced, mediated through complex power relations. On this count, one would like to see in what way if the dealer were from the lower caste would change the PDS functioning towards their interest.

Incidentally in Bihar-Village B1 the year the *Bhumiyaar*-dealer got the dealership, it was reserved for the lower caste. The story, which is known only to a few of the SC/OBC households, is that the present dealer strategically took away the dealership from a lower caste nominee. I was told that the present *Bhumiyaar*-dealer in fact had encouraged the lower caste person to apply for the post, and even personally took him to the district officials to file for the dealership. However, when the dealership got finalized, the upper caste *Bhumiyaar*-dealer, by bribing the district official transferred the dealership in his name. Examples like these are quite common and limit the ambit of affirmative action in expanding the portfolio of coping strategies.

6.5.1 Negotiations that works for the villagers as coping strategies: Using fissures among groups to negotiate

In another case in the UP-Village UP1 predominantly SC, people devised their own negotiations with the dealer and other agents. They knew that the relationship between the present dealer (OBC) and the *pradhan* (SC) was acrimonious (both fighting a court case against each other on the possession of the dealership). As a rational response they did not want to add fuel to the fire by giving ammunition to the *pradhan*, who anyway had a bad reputation. Moreover, people did not want to disrupt the PDS functioning by lodging complaints on issues that they did not think were completely non-negotiable.

Moreover, the villagers knew that since the *pradhan* and dealer did not pull well, it could work in their interest, since the dealer could not afford to displease them, and would behave well. He would please the villagers by obliging to give in to their requests of availing the grains of their choice (rice or wheat) if there were a need for it. The trading off benefits happened at various levels. 1) unlike the previous dealer of this village (who had to give up his dealership after he took up the *pradhan*'s role: see chapter 4, section 4.5.1), the present

one disbursed grains on a regular basis, kept the rights-holders informed of the time for disbursement (though some interviewees complained that it is never a fixed date and that the shop is kept open for just two days, denied access to grains later, if they fail to make it on those dates; 2) shows good behavior and is quite approachable; 3) rights-holders' past bad experience with the previous dealer, also worked in his favor. With the fear of disrupting the PDS functioning, the rights-holders overlook issues such as with quantity allotted. The symbiotic relationship between the dealer and the rights-holders worked for both.

6.5.2 Village dynamics mediated by local elites, and power equations

Though the rights-holders' narrative of the PDS experience in UP 2 was like that of the UP1 in terms of the PDS functioning, the dealer and the *pradhan* of this village are from the OBC category, and the majority are also from the OBC. Recall, OBC is almost a forward caste when pitted against the SCs/STs in general (Deshpande 2007). With these two incidents from UP villages I want to show how the relationship between dealer and the *pradhan* has a spillover effect on the rights-holders and how they cope with that.

Unlike in the UP1 where the relationship between the dealer and *pradhan* was not good, here it was exactly the opposite. Both the dealer and the *pradhan* shared a congenial relationship and were willing collaborators in the functioning of the PDS. It was a regular feature for the dealer to supply PDS grains, sugar and kerosene oil to the *pradhan*. That was his way of keeping him 'happy' so that he does not interfere nor come for the inspection of the PDS grains disbursement. There were two reasons for this symbiotic relationship where the dealer was obligated to keep the *pradhan* happy: First, the present dealer is not a resident of this village, and technically as per the norms of PDS, if one is not from that village he/she cannot take up the dealership. The dealer had to be in good books of *pradhan* to continue with his dealership. The implicit negotiation meant that the *pradhan* must have a regular supply of the PDS grains. Second, the *pradhan* who is perceived to be corrupt is known for his connections with the block and district officials. He had both the requisite political network, as well as the economic power to bribe, and manipulate. He has been the *pradhan* of this village for the past 15 years, and now through his wife is the de facto *pradhan*, owing to the reservations for women for the post of *pradhan*.

Sharing a good relationship, worked in favor for both the dealer and the *pradhan*, though being of the same caste did not play out overtly for sharing a good relationship, however if analyzed in relation to UP 1, where caste was also one of the reasons for the tension between the two, it cannot be ruled out in this village caste was a cementing factor for the bonding they shared. Being of the same caste, of the same economic status, and the ‘back-door’ negotiations they shared seemed to have led to tacit collusion.

Interestingly, the caste dynamics does not seem to work when it comes to the rights-holders and the dealer or the *pradhan*. In absence of access to any formal grievance mechanism, considering that the *pradhan* was a close ally of the dealer, the rights-holders are content that despite issues around the quantity and timeliness of the PDS grains, there was a reasonable ‘regularity’ in the disbursement. The fear of losing out on their ration cards if they oppose was also a deterrent leading to indifference as an optimal coping strategy for the people whose entitlements were at stake. By not taking up any action against the dealer or the PDS functionaries the biggest cost that would occur if ration card access was not there was being avoided.

Since nearly more than 70-80 percent of the rights-holders in the sample from Eastern UP villages had their own agricultural lands, they primarily had their own produce for consumption, it was observed that majority would sell off their PDS grains at the nearest *Kirana* shop at a rate much higher than what they pay to the dealer. This was invariably the practice every month which even the dealer was aware of. The rights-holders were thus not affected by lower quantity in substantive ways and were happy that the ‘regularity’ of PDS disbursement was maintained, which indirectly ensured them some additional income on a sustained basis every month. Resale of PDS grains was certainly a common active response coping strategy based largely on individual action.

6.5.3 Strategic waiting and free riding

Olson (1965) introduced the idea that collective action is itself often a pure public good. Thus, collective action cannot be relied upon to solve coordination problems in large unorganized groups. As an example, Olson applied the idea to the case of labor unions. Given the size of the beneficiary groups, the failure of collective action to address a public goods

problem as highlighted by Olson (1965) fits the context of coping strategies of the numerous rights-holders for the PDS.

Olson (1965) begins by assuming that individuals are mainly self-interested while engaging in collective action. The costs and benefits of everyone is affected by group size and the nature of the interests that define two types of groups viz. inclusive groups and exclusive groups. Inclusive groups attempt to advance ends where group focused on such interest benefit from increases in membership because costs fall as they are shared and/or because the effectiveness of collective action increases with numbers (as cited in Congleton 2015).

In contrast, “exclusive” groups attempt to advance aims for which average benefits fall as the group size increases. There are benefits from restricting group size. If the benefits are a public good, then there can be free riding i.e. obtaining benefits without incurring actual or potential costs. Though Olson’s argument was made in context of issues around how best to govern natural resources used by many individuals in common, it can be extended to examine how certain individual behave in accessing their right to certain resources, in this case being the PDS. If collective action improves functioning of the PDS, it is a public good and there can be free riding since there are costs to contributing towards collective action (fear of penalty, being spotted or simply allotting time).

Olson challenged the presumption that the possibility of a benefit for a group would be sufficient to generate collective action to achieve that benefit. In the most frequently quoted passage of his book Olson argued that “unless the number of individuals is quite small, or unless there is coercion or some other special device to group interests, collective action towards achieving shared common interests would not work”. In the extreme case if all free ride, no collective action will emerge.

Apart from free riding in the devising of coping strategies, there is also strategic waiting. As discussed above, unless a critical mass emerges, it might not be an optimal strategy to stand out among the few and be counted as complainant. Strategic waiting and free riding qualifies as problem oriented coping mechanisms. Drawing from the experience of one of the villages of Bihar, I examine how the reluctance on the part of the rights-holders to lodge a complaint despite blunt discrimination in disbursement of PDS grains, is part of their strategy to not

come under the lime light since the collective action leading to threshold critical mass is missing. There is both free riding as well as strategic waiting.

The few who have lodged a complaint have done so mostly at the village level i.e. *panchayat*. Table 23 presents the node for expressing grievance or lodging complaints. An overwhelming proportion of those who air grievances do so at the *panchayat*. As a matter of local governance, that would seem the optimal coping strategy. Yet, at that level distinctions based on caste, gender and local power relations are more entrenched. There seems to be a lack of capacity in taking matters to the higher levels without collective action.

Table 23: Nodes for registering grievance -Proportion of complainants using the channel

	Bihar	Odisha	UP	Combined
Panchayat	73.05	71.88	85.71	73.33
Block Development Office	20.57	15.63	14.29	19.44
District Administration	2.84	6.25	0.00	3.33
Local Political Leader	2.84	0.00	0.00	2.22
Local Religious Leader	0.71	0.00	0.00	0.56
Village Elders	9.22	37.50	14.29	14.44
Local Community	14.18	0.00	14.29	11.67

In the Bihar-Village B3 while majority complained about the abysmal functioning of the PDS, none seemed inclined towards complaining to the higher authorities, including to the Marketing officer (MO) who comes for inspection occasionally (“*very rare sight though*”, most said). Corruption at different levels, the connection of the dealer with the block officials and above all, the culture of bribery was some of the reasons which acted as deterrents for the villagers to lodge any complaints individually or collectively. Further they also observed that nobody in the village will come forward to complain. Everybody thinks why they should unnecessarily create enemies (“*Dushmani kyon le lein*”). Nobody will stand by you even if you want to complain, they said. “*They will always wait for someone else to take the first step*”.

In this bid to free ride, in equilibrium no one ends up complaining. Recall that B3 (see chapter 3, section 3.8) is seemingly a homogenous community with majority belonging to the *Yadav* caste (the OBC category in the caste hierarchy)⁵⁶. The dealer, the *Mukhiya* and

⁵⁶The *Yadav* are, at present, mostly a landowning community, with large sections being small-scale farmers. Their traditional and main occupations are animal husbandry (cattle and buffaloes) and agriculture, with the

most of the population is from the *Yadav* community. It is called the village of “*yadavs*”. While *Yadavs* are OBC in the caste hierarchy, they also behave as a forward class when pitted against the SCs. The relative positions in the caste hierarchy and the incidence of power because of it is often an element in the set of coping strategies. Even amongst the *Yadavs*, economic status of the beneficiary and whether you belong to the same clan or “*gotra*” determines access to PDS. Homophily seems to work in upper echelons.

In this village there are several contextual factors, inhibiting collective action. The presiding *Mukhiya* is a woman who is seen as ineffective. Her husband runs the governance of the *gram panchayat* on her behalf. He is the signing authority and even attends all the official meetings on her behalf. The dealer and the *Mukhiya* are hands in glove in siphoning of grains (“*Mukhiya mila hua hai*”), creating ghost cards and using the ration cards as a tool for garnering votes during the election (based on observations in the field). “*During elections, all these Mukhiyas will come to us to ask for our vote, will fall at our feet (“pair chaat lenge”), but once they come to power, they will treat you as dirt*”, said one of the SC female respondent.

Importantly from the point of view of collective action, the respondents emphasized that there is no unity amongst people here. The inclusive groups as in Olson (1965) quickly convert into exclusive groups. They easily get sold off during election time. This was reiterated by one of the local political leader as well who recounted how he had initiated a signature campaign against the dealer, made innumerable meetings with the villagers to gather them to lodge a complaint. However, when the officials came to cross check the validity of the complaint, none came forward.

One of the respondent during the FGD said, the reason why people do not come out in open is because they are scared that their ration would stop coming and that their name would be cut off from the beneficiary list. This fear mainly stemmed from being the odd one out.

selling of milk and milk products forming an integral source of their livelihood. The *Yadav* is a relatively prosperous community occupying a respectably comfortable, middle position in social hierarchy. However in the recent times, the *Yadavs* have emerged as a dynamic community in politics and administration and are quite prominent in state and, even, national level politics. They however has been listed as an Other Backward Classes (OBC) community under the provisions of the Indian constitution. This grants them, along with other OBCs, a number of affirmative action privileges such as fixed quotas in government jobs and higher educational institutions and relaxed criteria in competitive exams.

Incidentally this was further emphasized by one of the *Yadav* household male member, who complained that once when he had tried to protest the dealer for keeping his ration card, which ended up in fight, he was arrested by the police, kept in the lock up and was made to pay a fine to be released on bail. His fault was, he asked for his ration card back from the dealer, and he was penalized for doing so, he said. He emphasized that no one came out in support to take up his fight.

The dealer, the villagers allege is indeed not scared of any threats of complaints. He openly taunts the rights-holders if they threaten to complain "*Chalo chalo block jao*" (go to the block, nothing will happen). "*If a mosquito has four legs, if one leg goes, four legs remain*", the dealer will taunt, thereby meaning, complaints will not do any harm to him. Unsurprisingly, this dealer family has been running their dealership since three generations. Their contract just gets renewed every year, said one of the respondent. Clearly, he was keeping his own '*gotiyas*' (clan) happy so that whenever there is a checking, they would vouch for him said majority of the respondents.

Interestingly this village has seen the removal of a dealer in the past based on the complaints of the villagers i.e. through some collective action. Some of them recounted the incident saying when the official came to check, they did an elaborate process of finding out what the people complained about. They made videos of people recounting their stories of how they were cheated by the dealer. And few months after the procedure, the dealer was removed. Since collective action worked, there should have been a repeat since the payoffs were positive. Though encouraging for the villagers, it was perceived as a one-off case and was one where the dealer may not have sufficiently bribed the officials. Hence, despite the outcome the required motivation for collective action does not seem to have worked. Perhaps a sizable number of such cases could break the mould.

Could there be other sources for organization and fostering of collective action? Importantly, even the seemingly vibrant SHG group where people are brought together which is working in this village, had failed to lodge a complaint against the dealer, despite discussing about it many times in their own forums. The reason, some of the SHG members cite is that even though they discuss, nobody is ready to take up the issues in a formal way. Doing so brings the person in the spotlight and all the problems related to collective action as discussed above come to the fore. For women, the costs are aggravated by paucity of time, problems at home,

workload and the sole responsibility to take care of their children. *“If we go to the block to complain, where do we leave our children”*, said some of them. Moreover, even if they go to the block, nobody takes them seriously. Even to meet the Block Development Officer is a big hassle. The private costs of collective action are reasonably high.

There are also intangibles determining private costs. While some are vocal in airing their grievances, enter verbal fights with the dealer, there were others, who despite knowing that the quality of rice is bad, the quantity is less, and the price is high, consider it below their dignity to fight for ration. They would rather work, earn, and buy their grains from the market. *“Let him siphon off the ration. Let him take it away. Let him become rich by taking away poor man’s grains. We can survive on “roti-namak” (bread and salt), they reason out. The apathy of the officials, the continued harassment by the dealer, have made the villagers not protest and be content with whatever is being doled out. As one of them said, “Has it come to this that we will now have to fight for our ration (Maar pit karbo?)”. We do not complain even if months go by when we do not get ration: “Can you get rich by fighting for ration?” “Jhaghada se dhan mili?” they asked.*

However, when on one hand, some were resigned to the entitlement snatching, there were others who had their own ways of challenging the system, as one of the local leader (household) declared proudly, showing me around his well-constructed cemented house, *“Even if I am not a BPL. I have a BPL card issued in my name⁵⁷. The Mukhiya had to give it to me since I know his weakness (the corruption that he/she is doing) and he knows mine (that I am not a legitimate card holder). If he messes up with me, I too can mess up with him”*. This kind of symbiotic relationship was often behind the differential experience across households even when they have similar characteristics. The differential experiences in turn translates to strategic coping mechanism.

Going back to the case of Bihar-Village B1, with dealer from upper caste (*Bhumiyaar*) and the *Mukhiya* (again a *Bhumiyaar*). Interestingly the number of households of the upper caste is greater than other castes, except for the ‘*Mahatos*’, OBC, who are in equal numbers as the

⁵⁷ Though not in the BPL category, he still has a card. He showed me his house (*pucca-cemented* house) and boasted that he still gets ration. He owns tea shop in Patna. His father has political affiliation (“*Jugaad wala neta*”).

*Bhumiyaars*⁵⁸. Understandably, both these castes dominate the village social, economic and political structures. During my field work, I was told that there is always an antagonistic relationship between these two castes. The struggle for power, be it for the post of the *Mukhiya* or of the PDS dealer is always between these two groups. I was told that the present *Mukhiya* who is a *Bhumiyaar* came into power after 10 years of rule of the *Mahatos*. Not surprisingly, the dominance of the *Mahatos* have been on a decline, which in a way underlies the tension between this two groups.

There were stories around how the *Mahato-Mukhiya* used to exploit women from SC as well as those economically disadvantaged from their own caste (OBC and *Mahatos*). One of the *Bhumiyaar* female respondent recounted the story of an SC woman, who had gone to seek *Mukhiya*'s help to get the job in the village *anganwadi*, to which she was asked for 'sexual' favors by the *Mukhiya*. In fact, the reason for having lost his *Mukhiya* seat was primarily attributed to how he sought favors from lower caste women.

On the other hand, in the past it was one of the *Mahatos*, who had mobilized the whole village to protest the earlier dealer (*Bhumiyaar*) and fought a long-drawn battle to remove him. In his interview, this man named Jeevan Kumar (not his real name), said that he had to face a lot of threats from various quarters for doing so. However, he stuck to his stand, gathered all evidence to show to the authorities how the dealer was cheating. Though some of his claims seemed to be validated by some of the respondents' however there were disapproving voices too. Some did say that the earlier dealer was irregular, abusive but Jeevan Kumar's protest the dealer was itself motivated. Notwithstanding the dissenting voices against Jeevan Kumar's contribution, the equilibrium where no one complains was broken only when there was a leader who had the skills to create a critical mass.

⁵⁸ In the zamindari villages, "*Mahto*" was a caste-agnostic title given to the headman of a village ward. The mahto's duties were to maintain peace in his area, and collect revenue for the *zamindar* (feudal landlord). Now, "*Mahto*" is used as a surname by several communities. The castes that use *Mahto* or *Mahato* as a surname, clan name or title include: *Beldar*, *Bhumihar*, *Chamar*, *Dhanuk*, *Dhobi*, *Dusadh*, *Goala*, *Khairwar*, *Koeri*, *Kudumi Mahato* (*Kurmi Mahto*), *Oraon Bhuihars*, *Sunris*, *Tharus*, *Yadavs*

6.5.4 Factors behind the perceived better functioning of PDS in Odisha village: Collective action needs an external stimulus

Following on the example above, example from a village in Odisha can be used to highlight that the perceived better functioning in this village was due to the collective action of protest, but an action that needed an external stimulus, here an NGO. An external agency can minimize strategic waiting and free riding.

The present dealer has been serving for almost 4 years and majority seemed to be satisfied with him. The reason for the relatively well-functioning PDS was a past event that led to the ouster of the previous dealer. The earlier dealer had been serving for the past 10 years, till 2012. During his tenure as the secretary of the *gram panchayat*, the post of the dealer was vacant. Taking advantage of the situation, he took charge of it. Being a drunkard, he was very abusive in nature, would sell the ration grains in another city, closer to this village where his father-in-law owned a grocery shop (*kirana* shop).

Subsequently, he started being irregular in distributing grains that at times stretched to 3-4 months in a year. Though the majority were frustrated with his way of functioning, the villagers were not united, and nobody had officially lodged a complaint since he was a government official, the fear that they might be penalized. During this time, an NGO named *Jan Kalyan Sansthan* was working in his area. The person who oversaw the project, when he came to know of the situation, started a movement against the dealer. He mobilized and united the villagers, made them aware of what they were entitled to under PDS. He then filed a written complaint with the signature of around 200 rights-holders and forwarded it to both the block official as well as to the district collector's office. Subsequently, he also called for a strike at the panchayat office to draw attention of the officials to the malpractices happening at the PDS shop. The then district collector, made a visit, interacted with the villagers and immediately acted. The dealer's contract was terminated, and he was jailed.

6.6 Summary

In this chapter I have analyzed the coping mechanisms for the PDS recipients given their social, economic status and their power situation in the local context. The households given the heterogeneity invoke a spectrum of coping strategies to mitigate compromises in their entitlements including in the selection process itself for becoming a beneficiary. Strikingly, there is very little utilization of the formal or official channels to protect the mandated allocation. This lack of formality in coping mechanism is quite generic and seems to hold across the three states and even at the village level.

The findings from the case studies indicate that the actual or potential rights-holders of PDS come up with a variety of informal or quasi formal coping mechanisms. The coping mechanisms work to hedge against some of the issues around PDS determined by many factors as discussed in chapter 4. Heterogeneity leads to a diverse portfolio of coping strategies. The strategies and mechanisms vary across states, even across villages based on the characteristics or the nature of underlying heterogeneity that bears on the choice of the rights-holders. The possible choices of coping strategies and mechanisms, the subsequent outcomes determine the perceptions and experiences about the PDS and is a factor in pinning the needs and preferences.

With the heterogeneity, the portfolio of coping strategies varies significantly across households based on their characteristics. The coping strategies overwhelmingly represent the adjustments in the short run to preserve the long-term entitlements. Overall, the coping strategies comprise a complex web of trade-offs that at first glance might not even seem rational. In the short run for example, some consumption rationing is adopted as a coping strategy to have sustained access to food in the future. Coping mechanisms are thus often dynamic and depend on the changing external environment within communities and households. The coping mechanisms also depend on the vulnerabilities and capacities at an individual as well as the community level.

Another set of trade-offs comprises adjusting on the extensive margins. Intensive margin would comprise trying to get more grains as mandated, but adjustment could also happen by substituting grains. For example, even though the most preferred grain for the households might be rice, many are willing to trade off rice for wheat if the latter comes with

comparatively good quality. Additionally, households consider the quantity versus quality trade-offs that often emerge as a choice problem for the households. Similarly, regularity in disbursement is another factor that is favoured and can be traded against low quantity or quality. I also find trading off benefits at different levels. Since quality of service is an important attribute of access to the PDS and given the local power relations and other differentiators, some households can face real bad outcomes, one coping strategy is also to honor civil behavior of the dealers which anyway is an unwritten mandate and should not lead to any trade-offs in principle.

Few further facts stand out in terms of the coping strategies. First, silence and/or inaction is a conscious and often optimal coping strategy. The counterfactual of raising voice against compromises in the entitlement is widely assessed subjectively to be suboptimal given the socio-cultural, economic and political context. Often as a coping strategy benefits are traded off against each other leading to choices that individually might not seem rational or correct but as a combination they make sense.

Problems in collective action are quite prevalent in case of coping strategies related to the issues in the PDS. In my surveys across the three states there is a very sparse incidence of collective action, its significant effectiveness notwithstanding. This is because each household by itself only has limited capacity. One clear factor inhibiting collective action is wide social and cultural divisions within a village. This happens at a striking level of granularity that goes to levels of sub-castes and clans. Consequently, only few coping strategies are effective and result in outcomes that might not be the first best. In this context it is important that PDS delivery comprises a bundle of attributes and those are traded off in delivery. Regularity in disbursement is often salient and as a coping strategy household often are willing to trade it off.

In the context of coping strategies, it is important to point to the big arbitrage opportunity after the NFSA, on the one hand has raised the stakes of households but has done so also for the dealers and other agents involved in the safety net programme. This is because the price differential between the PDS and the open market has gone up by almost six times leading to greater incentives for entitlement snatching. With high stakes, households realize the possibility of greater entitlement snatching and being risk averse might choose coping

strategies accordingly. At the same time stakes are also high for the recipients and this can spur more action to claim their entitlements, an entitlement fetching strategy.

What coping strategies are adopted and what are the outcomes from those bear on the experiences with the PDS and will be reflected in the needs and preferences of the rights-holders, which I discuss in my next chapter. If formal grievance redressal systems are not working and entitlement snatching is prevalent, one would expect a desire or even demand for a direct benefit transfer scheme. Similarly coping mechanisms are not functional for comparatively dear commodity, the needs and preferences regarding the product portfolio will be affected.

Chapter 7: Understanding preferences towards PDS: More than what meets the eye

There are several basic assumptions that underlie the accessibility to PDS and thereby uptake of the subsidized food grains, for example, the assumption that providing rice and wheat at subsidized price will automatically translate into an increased uptake. The logic is often extended to other commodities like coarse cereals and pulses.⁵⁹ Often, with the underlying changes in preferences, for example, either due to changes in the dietary patterns, food habits access to alternative markets, family sizes and age composition, inclusion in the PDS may not automatically translate into uptake of these commodities. There often seems to be a disconnect between the intent of the policy and the actual implementation as well as the outcomes.

In my previous chapters I highlighted the experiences of the rights-holders in accessing PDS. I examined the context-specificity of the issue in terms of the socio-economic conditions, the local power relations, the political economy, and the locational heterogeneity reflected in caste, class and gender, which in turn determine preferences with respect to the PDS. Preferences refer to characteristics that a beneficiary wants to have in aspects of the PDS or other systems that gives more satisfaction. Preferences are determinants of demand for a good or service.

In analyzing the preferences of the rights-holders, I use both quantitative as well as qualitative data to lay out the analytical issues in determining the preferences of the rights-holders with regards to different attributes of the PDS. I try to assess the role of contextual factors like gender, caste, class, including socio economic factors, in addition to institutional

⁵⁹ Note as per the NFSA-2013, it has been proposed that it is desirable that pulses and coarse cereals should also form part of the PDS basket in order to increase diet diversity amongst the poor. “We support the Government’s initiative of Food Security Bill. We need to look at not only food but nutrition security too. We urge the Government to include pulses in the proposed Bill” (“Include Pulses in Food Security Scheme” 2013). Similarly, representing the stand of the influential Right to Food Campaign in India, Biraj Pattnaik, principal adviser to the Supreme Court commissioners on the right to food, stated, “It’s time for the PDS to diversify in a basket of foods. We are giving cereals but we should also look at distributing millets, pulses, oils, and possibly even fruits, eggs and milk to provide wholesome nutrition”. Hence, one of the important strand of the debate has been the dominance of rice and wheat in the PDS that potentially crowd out other foods from the diet or crowd in by freeing up money spent on rice and wheat. These have nutritional implications for the beneficiaries and farmers who grow rice and wheat for the procurement system, who might have less access to a more diverse diet because of perverse incentives to grow just rice and wheat, at least in states where procurement is high. Given the federal structure, it is entirely up to the states to implement it. Some of the Indian states have gone ahead in including pulses and coarse cereals in the PDS basket.

set up, that determine one's preferences. Additionally, I use qualitative data to analyze how PDS itself modifies the consumption pattern of the rights-holders in terms of the choice of food grains, for example, the variety of rice consumed by the rights-holders especially in Bihar and Odisha.

The aim of this chapter is to explore how the experience of accessing PDS determine preferences of the rights-holders (actual or potential). I argue, preferences over certain attributes in the PDS (for example, choice of products provided for, delivery mechanism) are conditioned by the experiences while accessing the PDS (see Chapter 4, 5, 6), at times prospectively.

The chapter is structured in three sections. First, I focus on rights-holders' preferences for the products provided for in the PDS basket, specifically types of grains. In the second section, I examine the preferences over delivery mechanisms and the systems set for rights-holder selection. Finally, I refer to the preferences over administration and governance of the PDS analyzed in Chapter 5.

7.1 Household surveys for information on the preferences

The chapter is based on the household survey covering more than 1600 households across three states of Bihar, Eastern Uttar Pradesh and Odisha (see details about the survey in chapter 3, section 3.3). Recall that the survey was conducted among predominantly poor households who currently have access to subsidized food from the PDS. Sample districts and blocks were selected from all the three states to conduct the qualitative survey. The qualitative survey builds on semi-structured interviews, FGDS, observation designs (see Chapter 3, section 3.2.1).

7.2 Preferences for product portfolio:

What and how much quantity at what prices and quality households purchase from the PDS and non-PDS sources bears on the preferences of the rights-holders in relation to the PDS. Table 24 below summarizes the quantity and prices of rice from PDS and non-PDS sources. Similar distribution occurs also for wheat barring Odisha where wheat consumption is small.

Table 24: Portfolio of rice consumption

State	Household purchase of PDS rice (kg/month)	Mandated PDS price/price paid	Market purchases	Open Market price	Own production rice
Odisha (tribal districts)	19	Rs 1 per kg/1 /kg	30 kg/month	Rs 22/kg	22 kg/month
UP (Eastern)	13	Rs 4/kg/ Rs 3 /kg	24 kg/month	Rs 21 /kg	23 kg/month
Bihar	16	Rs 4/kg/ Rs 3 /kg	26 kg/month	Rs 21 /kg	24 kg/month

Apart from food grains, with regards to pulses, on average, respondents in Odisha and Bihar buy 3 kg per month at the rate of Rs 82 per kg, and Rs 77 per kg respectively, in addition to 3 kg which comes from their own production, while in UP the respondents purchase nearly 5 kg of pulse per month for Rs 62 per kg, in addition to 2 kg from their own production (Table 25). This seems comparable to the national average of 6 kg per month which suggests decline in pulse consumption over the years. Several studies (BIRTHAL et al. 2013; Gaiha, Kaicker et al. 2012) document diversification in consumption in India away from staples (such as cereals and pulses) toward high-value items (fruits, vegetables, animal source food, and processed items). Apart from price dynamics, shifting preferences, could also play a role in declining consumption. This certainly prompts me to investigate further regarding the preference of the rights-holders for pulses from the PDS. Table 25 presents the full profile of different grains and pulses in the sample.

Table 25: Sources of food from different sources (and price)

Wheat

State	Wheat from PDS		Wheat from Market		From own Production
	Quantity	Price	Quantity	Price	Quantity
Bihar	11.09	2.97	26.69	17.91	21.66
Odisha	4.55	5.67	17.44	21.62	0.00
UP	11.91	5.12	35.28	19.82	20.27
Combined	10.91	3.67	27.7	18.77	21.39

Pulses

State	Pulses from Market		From own Production
	Quantity	Price	Quantity
Bihar	3.4	81.15	3.03
Odisha	3.05	83.28	3.08
UP	5.1	90.49	2.25
Combined	3.45	82.92	3.00

7.2.1 Product Choice 1: Preferences for rice or wheat versus other commodities

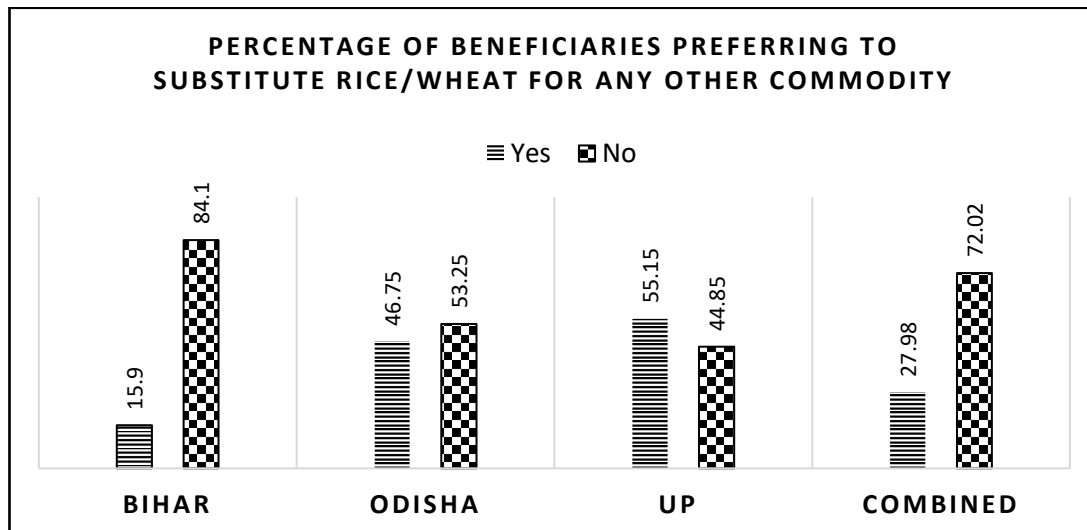
In terms of the choice of the product portfolio in the PDS, the heterogeneity in choices comes out quite starkly across the three states. What people want in terms of products in the PDS is a function of the current supply of food, the quality and variety from different sources and relative prices. The product choice here takes place at three levels. First, the product itself (whether rice, wheat or pulse, and/or coarse cereals); Second, the variety of the product (for example rice variety includes “*arwa*” (fine white rice) and “*usna*” (parboiled rice) or in pulses examples include chickpea or pigeon pea; third, the quality of the product (for example quality of rice provided by PDS, and the potential adulteration in pulses with *khesari*, a low quality pulse).

In cereals (rice and wheat), the mainstay of PDS, my quantitative survey did not examine the binary choice between rice and wheat. I have, however covered this extensively in my qualitative work. I specifically assess the issue of substitution of rice and wheat as opposed to addition of any new commodity which would obviously be preferred by all and there is no basis to analyze choices in that case. The main choice problem that I pose is the following: given a choice will the rights-holders substitute rice or wheat with any other commodity.

In Bihar nearly, 84 percent did not want to substitute rice or wheat with its equivalent in terms of any other commodity i.e. pulses or coarse cereals, in Odisha and Eastern UP, around 53 percent and 45 percent, respectively did not want to substitute rice or wheat with any other commodity. Note, in Odisha, knowing that it is predominantly a tribal belt and mainly rice is being provided for in the PDS, I asked the preference for substitution of rice and wheat separately. When the choice set is limited to just rice, nearly 94 percent do not want to substitute rice with any other commodity. While rice is still the holy-grail in Odisha, respondents seemed to be more willing for substitution when given the choice of wheat with any other commodity (a significant 46 percent want to substitute wheat with any other product).

In Eastern UP though 45 percent did not prefer substitution, however nearly 55 percent preferred substitution (Figure 20). I find similar results by gender and social groups. The possible reasons for this trend in preferences for substitution with rice and wheat are discussed below, drawing from my qualitative interviews.

Figure 20: Preference for substitution of Rice and Wheat



Further, I also look at the preference specifically of those rights-holders who preferred substitution. Across the three states, majority preferred pulses, followed by edible oil and sugar (Table 26). I included edible oil and sugar because historically they have been provided in the PDS.

Table 26: State wise preference for substitution with other commodities in place of rice/wheat

	Bihar			Odisha			UP			Combined		
	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
Pulses	77.9	18.8	3.4	100.0	0.0	0.0	98.1	1.9	0.0	86.8	11.3	1.9
Edible Oil	22.1	68.6	9.3	0.0	100.0	0.0	1.6	93.4	4.9	15.8	76.2	7.9
Sugar	4.4	21.7	73.9	0.0	66.7	33.3	0.0	27.3	72.7	3.1	24.2	72.7

(R1=Rank 1; R2=Rank2; R3=Rank 3)

Apart from the choice at the level of commodity, there are sub-commodity choice issues relating to the variety and quality of the currently disbursed items i.e. food grains. I turn to this preference of the rights-holders next.

7.2.1.1 Preference based on variety and quality of the disbursed grains: Is PDS changing the consumption pattern of the rights-holders. Case of Bihar

The findings on preferences about variety and quality of the disbursed grains are primarily drawn from my qualitative research. I take the case of Bihar and Odisha to illustrate my points. In Bihar a significant majority preferred a change in the variety of rice. There is a clear lack of preference for the variety of rice i.e. “*arwa*” or fine white rice i.e. presently being provided in the PDS. The preference is for “*usna*” or par boiled rice.

Low preference for “*arwa*” rice is also attributed to the belief that it leads to gastric ailments. In addition to the variety of rice, there are issues around the quality of rice as well. Since quality of rice is often substandard, households rarely use PDS rice for own consumption. Most either sell off the PDS rice or buy “*usna*” from the market or use the money to buy other items like salt or tea. With larger quantities they sometimes use the money to buy books and stationary for their children. If the quality of rice is below a threshold, it cannot be sold off, they use it to feed the animals.

If exchanging by selling off in the market turns out to be infeasible for some, they innovate in cooking *arwa* rice itself. Some try and make pancakes or "*pitha*" out of *arwa* rice. Getting PDS rice ready for consumption at times is quite labor intensive for women. As most women respondents complained, the dealer mixes good and bad quality rice. Cleaning the PDS rice and making it palatable is often a big draw on their time. Because of these factors, at least in one village in my sample, people prefer to substitute rice for wheat as the PDS wheat quality was comparatively good, and there were no issues around its variety. This seems to suggest that PDS may endogenously change the consumption pattern across types of food grains, and thereby could alter or even distort the dietary pattern of the rights-holders. In this context, the willingness of the dealer to substitute wheat for rice was a marker of good behavior of the dealers. Respondents were appreciative of the dealers if they were willing to make the compensating substitution. They tend to overlook quantity discrepancy, the issues around measurement, and the higher prices charged. Product transformations (making *pitha* i.e. pan cake) or substituting wheat for rice comprise elements for the product portfolio choice but they are essentially part of coping strategies as discussed in chapter 6.

Some dealers also do not mind substituting wheat for rice, because after NFSA, PDS wheat price is INR 2/kg while rice is 3/kg implying that rice is likely to be comparatively valuable to the dealers as price wedge is higher leading to greater arbitrage potential. As observed by one of the block officials, substitution of rice with wheat gives the incentive to the dealer to sell off rice in the open market at a much higher rate. This also gives the dealer an avenue to indulge in more malpractices. Hence conditional on the preference, there is likely to be support of the dealer. Note that owing to the comparatively bad quality of rice, the rights-holders themselves request for substitution with wheat.

Desai and Vanneman (2015, pp.12) seem to suggest that PDS users "skew their consumption towards items they are able to purchase cheaply, namely cereals, while reducing consumption of other items like fruits and milk." The authors also note that, "PDS users seem to consume more cereals (20kg) compared to non-PDS users (18kg)." What I find is that there are significant composition effects even among different commodities provided by the PDS itself. In Bihar, the quality and variety of rice emerged as a significant issue because of which rights-holders were, either selling off PDS rice (*arwa*-fine rice) or exchanging that for wheat.

With the preferences capturing the demand side, I also interviewed government officials in Bihar to assess how the supply side relating to the variety and quality of grains mattered. The common factors that emerged from the survey were primarily related to problems in transport, storage (particularly after the rollout of NFSA that led to near universalization of the PDS, hence the increased demand for grains), diversion of grains, corruption at various levels, the dealer and lower official nexus, all were perceived to emerge as the stakes got higher post NFSA.

Strikes by transporters have been common and one was underway during the time of survey for protesting the tracking systems installation and regulation of the fares. From the supply side, because of transport and storage problems, sub optimal quality rice was being supplied. “*If you keep arwa rice for two months in a jute sack, it will be discolored, and will be infested by insects*”, officials opined and conceded that villagers were justified in complaining about the bad quality rice. However, state officials were less accommodating in considering the choice over commodities or varieties arguing at the end of day the rights-holders sell off ‘*arwa*’ rice.⁶⁰

Further, some district managers noted that notwithstanding the preferences, people have not complained also because for a section of population, PDS may not be their priority. They are more worried about the widow, old age and handicapped pensions. The pensions are additional benefit, so they want it. Whereas in PDS, they will only make effort to get their ration card, once they have that, they become complacent and do not bother much about the ration. Also, dealer can also use quality differentiation as a strategic instrument. The dealer for example may keep the rice stored for long. With deteriorated quality people are often dissuaded from buying rice. The dealer would substitute with wheat instead and sell off the rice in the market at a higher price.

The state of transportation, storage, the siphoning off good quality grains, and replacing with poor quality of rice grains all contribute to the rights-holders being subjected to residual, poor quality food grains. The internal state procurement of rice is also of suboptimal quality,

⁶⁰ This line of argument seems to reflect, as Rao (2006) in her analysis of *adivasi* women’s access to land rights in Bihar points out that “policy implementation is usually unresponsive to contextual particularities and reflects the ideological biases and pre-conceptions of implementers.”

which gets distributed through PDS, of which people do complain, and considering that wheat is not internally procured, but provided by Food Corporation of India (FCI), people generally are happy with the quality⁶¹.

On issues around why “*arwa*” (white fine rice) is being provided, despite the common knowledge that it is not preferred by the rights-holders one further economic reason is that private millers tend to opt for *arwa* rice since the investment in *usna* rice processing is double that of *arwa*.⁶² Note that in Bihar there has never been a protest that highlighted this issue. In contrast, other states like Tamil Nadu, have been quite vocal in demanding the variety of rice as per the needs of their people. One of the district officials argued that preference differs across regions even within Bihar. In Northern Bihar people generally prefer “*arwa*”, while in the rest of the state it is “*usna*”. He further added that the state government will be reluctant to provide for “*usna*” since it is costlier than “*arwa*”.

7.2.1.2 Quality and variety of rice and dietary specification: Example from Odisha

Similarly, in Odisha, predominantly a tribal belt, the preferred food is fermented rice. Since rice based non-alcoholic and alcoholic beverages are widely consumed by the villagers, they complained that the quality of rice provided by the PDS does not suit their dietary needs. In Odisha, rice is solely important, and wheat is largely not sought within PDS or outside. Across the surveyed villages in Odisha as well, there are issues around quality and quantity of the PDS rice grain. In one of the worst-off villages in the Kalahandi district, most respondents complained that for almost half of the year, the quality of rice from PDS is subpar, infested with insects or rodents, mixed with pebbles or cement.

Quality of disbursed rice has significant bearing on women’s time use patterns. Quality of rice added more work for the woman of the household in cleaning, washing before cooking.

⁶¹ Post the roll out of NFSA that led to the universalisation of PDS, there has been decentralization of procurement of food grains to meet the increased demand.

⁶² This was reiterated by the District Magistrate (DM) of Patna who stated that when he was posted earlier in one of the districts of Patna, he changed the PDS rice to “*usna*” rather than “*arwa*” by setting up an “*usna*” manufacturing plant there, but it was a costly proposition, he added. He however assured me during the time of the interview that he intends to roll out a similar initiative in the Patna district.

Additionally, one of the respondents stated that immediately after cooking rice it was alright for consumption but keeping quality was bad. A while after cooking, the rice depleted in quality to the extent that it was used for feeding animals or was thrown away. They also said that in parts of Chhattisgarh which border Odisha, households got *arwa* white rice which was their preference, but they were not provided.

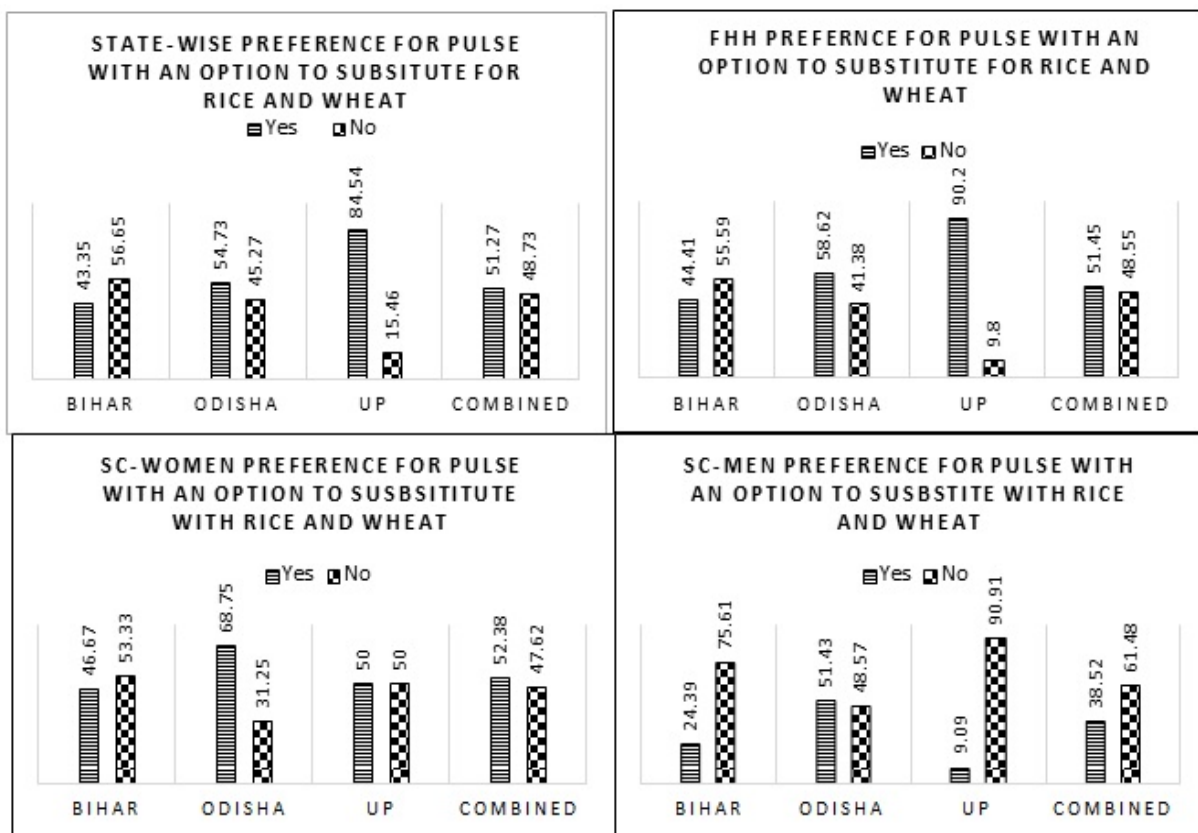
7.2.2 Product portfolio 2: Preference for pulses

There is an increasing demand to add pulses to the basket in the PDS. Chakrabarti et al. (2016) address the question - Would subsidizing pulses through PDS lead to a significant increase in its consumption? Between 2004/2005 and 2009/2010, four Indian states introduced subsidized pulses through the PDS, while other states did not. They exploit exogenous price variations to examine whether the price subsidy on pulses achieves its goal of increasing pulse consumption, and by extension protein intake, among India's poor. Using several rounds of consumption expenditure survey data and difference-in-difference estimation, they find that the change in consumption of pulses due to the PDS subsidy, though statistically significant, is of a small order, and not large enough to meet the goal of enhancing the nutrition of the beneficiaries. This result reflects to a large extent two factors:

- (i) Preferences have been moving away from pulses
- (ii) Where pulses have been provided it has been inframarginal units i.e. they do not fulfil the complete demand

In my survey about portfolio choices, the preference for pulses as a substitute for some grain reflects these realities. Except for UP where nearly 85 percent prefer pulses, in Bihar nearly 57 percent and in Odisha around 45 percent do not prefer pulse as part of their PDS basket with an option to substitute for rice and wheat (Figure 21).

Figure 21: Preference for pulse



With women at the forefront of food preparation, one expects women to be more nutrition sensitive and this could be reflected in the preferences about product portfolio. Based on the data, it seems that in Bihar amongst women and men, the preference for pulse is low compared to Odisha and UP (Figure 21). Moreover, this seems to be more pronounced amongst SC women and men (Figure 21).

In the combined data, the preference for pulse is not unequivocal (Figure 21). These stylized facts to a large extent are puzzling, considering that pulse is a dear commodity and it is unlikely that the rights-holders will not want it at the subsidized rate. There seem to be deeper or more nuanced factors determining the preferences over inclusion in the PDS as a substitute. What factors could be behind this preference? Is it the institutional, historical experience with PDS, intrinsic preference, or is it the fear that since pulse is a very dear commodity it will likely be siphoned off and they will have to do with just one commodity? (Recall the question asked in the survey whether they would like to substitute pulses with rice or wheat?)

I examine the possible explanations for this from my qualitative data. In Bihar for example, while majority welcomed the idea of pulses to be included in the PDS, they were not willing to substitute with rice and wheat. As one of the respondents remarked “*who does not like good things in life*”. The reasons for not substituting rice or wheat with pulse was quite nuanced. Owing to the experience with the PDS system, where less quantity and quality was a major issue, people were unsure if pulses, a comparatively “dear” commodity would ever be distributed to them. It will serve as an incentive for the dealer to sell off in the open market. They were apprehensive that instead of two commodities they would be left with just one. As one of the respondents observed: “*if pulses were provided in the PDS, the situation could become worse from the current state.*”

That this kind of mechanism was at play is corroborated by differences in preferences by social and economic status. This fear of denied access was more pronounced amongst the lower caste, who were more likely to express the view that if pulses were provided in the PDS, then they surely will not get it. As one of the respondents emphatically said, “*if we are not likely to get pulses if introduced in the PDS, then why should we let the dealer have the share.*” There also was disbelief amongst the rights-holders that the government would provide for pulse, and even if it does, like other good things in the past such as sugar and tea which were provided for in the PDS but have now stopped, pulse too will have the same fate.

In addition, they feared that the pulses that the dealer will distribute will be adulterated with “*Khisari*” or the “*Akati* seed”. Both are considered harmful to health. This is despite state government having banned the sale of “*khesari dal*” and its products and “*khesari*” flour and its products in the state with effect from January 1, 2004. The government had also decided to ban the sale of mixture of “*khesari dal*” and Bengal *chana* (gram) or “*khesari dal*” and some other pulse from the same date. The decision was taken in exercise of the powers conferred on the government under Rule 44-A of the Prevention of Food Adulteration Rules, 1955.⁶³

⁶³ “The Health Department (GOI) had issued a notification about the ban on April 1, 2003 amending partially its earlier notification issued on September 9, 2002 banning the sale of “*khesari dal*” and its products in the state three months from the date of issuing of the notification. The notification said that no person shall sell or offer for sale or be in the possession of the same for the purpose of sale of “*khesari dal*” and its products. The ban on “*khesari dal*” follows the view expressed by the Mumbai High Court on the matter about two years back. The Union health ministry had, in a communication to the Bihar health commissioner, Ashok Kumar Chaudhary, in December 2001, apprised him of the views of the Mumbai High Court on the matter. Mumbai

There also was updating of the beliefs regarding supply of dearer commodities in safety net programmes. Mid-day meals scheme for example where pulse is provided for, has often being charged for misuse by the workers in charge, they were very wary of it (see Shukla 2014). *“Would prefer pulse. If we get pulse we can make rice and dal (khichdi) but we know we will not get it. Once or twice the dealer will disburse but then he will stop and siphon off most of the times. The excuse he will give is “upar se nahi aaya” (there is a problem with the supply).*

Finally, the respondents in my survey were apprehensive about the quantity of pulses that will be provided for. In the above narrative taking the example of Bihar, I have drawn attention to some of the underlying fears that govern access to commodities like pulse. While the underlying fear of never getting their entitlement was generic for the other states too, in Odisha for example, the manifestation of the insecurity was slightly different. The preference for pulse was more as an “addition” than as a substitution for what is already being provided. In UP though a strong preference for pulse (since in the sample most of them owned their agricultural land, and consumed their own produce), the reaction of inclusion of pulse was more of “disbelief”.

7.2.2.1 Regression analysis of product portfolio choices (Pulse)

Below I look specifically for the correlates of the preference for pulses in the PDS. Table 27 presents the results of simple linear probability models to assess the determinants of the preference for substitution of pulses in the PDS for cereals such as rice. My hypothesis is that controlling for covariates, characteristics that bear on bargaining power and the experience with the PDS ultimately gets reflected in subdued preference for inclusion of pulses in the PDS what a simple choice would otherwise be given the difference in PDS price and market price for pulses. The last column introduces village fixed effects to account for village level unobserved factors.

High Court was of the view that Bihar and UP should also impose ban on the sale of "khesari dal" and its products. A health department official said that a petition had been filed in the HC demanding ban on the use of "khesari" in the country. The petitioner had claimed that the consumption of "khesari" had a crippling effect, the official said".(cited from the source:<http://timesofindia.indiatimes.com/city/patna/State-govt-to-ban-khesari-dal/articleshow/42307221.cms>)

Importantly, there is no significant difference in the preference for inclusion of pulses in the PDS between male headed and female headed households, perhaps due to reasons related to fear of snatching or lack of awareness (as discussed in section 7.2.2). I do not find a gendered difference in preferences. Clearly those who are powerful and likely to have better access to the PDS like those belonging to upper caste and having greater landholding tend to prefer pulses in the PDS. The weaker sections fear about their entitlement snatching given the power distribution at the village level. Strikingly, BPL households are associated with reticence towards inclusion of pulses in the PDS. This is supported by both the quantitative as well as qualitative analysis. The general caste status is significantly associated with a preference for inclusion of pulses in the PDS.

The fear of entitlement snatching provides a nuanced reason for portfolio choices. This evidence is further supported by revealed preference of those believing fair allocation in PDS to them being in favor of inclusion of pulses in the PDS. Indeed, those with greater snatching of their rice entitlement tend to be less likely to prefer inclusion of the pulses in the PDS. Accounting for village level factors, a unit increase in per capita snatching of rice is associated with nearly 5 percentage point reduction in preference for inclusion of pulses in the PDS. Overall the results implicate that preference for changes in product portfolio are conditioned by several factors that relate to current and past experiences with the PDS. The perverse incentives that changes in product portfolio engender are well recognized by the respondents and is reflected in their preferences.

I also use the relative need of pulses depending on the level of own production as a factor in heterogeneity towards liking pulses in the PDS. Expectedly those buying greater quantity of pulses from the market tend to favor them in the PDS. Though I do not present the coefficients of village fixed effects but relative to B1 village (in Bihar) many positively and negatively significant fixed effects come up revealing a significant presence of regional heterogeneity (Table 27).

Table 27: Determinants of preferences for inclusion of pulses in the PDS

VARIABLES	Substitute rice for pulses	Substitute rice for pulses	Substitute rice for pulses
Female headed households	0.0276 (0.0288)	0.0357 (0.0304)	-0.000321 (0.0289)
Scheduled caste	-0.167* (0.1000)	-0.189* (0.0964)	0.107 (0.0930)
Schedules tribe	-0.143 (0.103)	-0.123 (0.0995)	0.0910 (0.0989)
Other backward caste	-0.0753 (0.0974)	-0.136 (0.0942)	0.0806 (0.0903)
General	-0.0103 (0.108)	-0.0990 (0.107)	0.201** (0.103)
FPS availability in their village	-0.0857** (0.0358)	-0.0349 (0.0382)	0.0265 (0.0589)
Aadhar card holder	0.131*** (0.0344)	0.111*** (0.0364)	0.0383 (0.0379)
BPL_card holder	-0.176*** (0.0346)	-0.227*** (0.0400)	0.0290 (0.0516)
Number of months in a year that got PDS rice	-0.00989** (0.00460)	0.0231*** (0.00617)	0.00189 (0.0103)
Quantity of pulses from market	0.0224*** (0.00502)	0.0339*** (0.00524)	0.0170*** (0.00577)
Pulses from own production	-0.00833 (0.00687)	-0.00226 (0.00719)	-0.00900 (0.00648)
Homophily caste	-0.0413 (0.0272)	-0.0500* (0.0276)	-0.0944*** (0.0273)
Feel fair allocation in FPS	0.00808 (0.0297)	0.0544* (0.0306)	0.108*** (0.0309)
Does the ration shop owner have electronic balance for weighing	0.0397 (0.0317)	0.0124 (0.0314)	-0.0256 (0.0438)
Food expenditure	-2.91e-07 (4.14e-07)	-8.84e-07*** (3.14e-07)	-1.16e-06*** (4.25e-07)
Total landholding size (in acre)	0.00314 (0.00398)	0.0107** (0.00451)	0.0142*** (0.00421)
Mukhiya dealer same caste	-0.0829*** (0.0305)	-0.0148 (0.0329)	-0.0673 (0.0492)
Age	6.54e-05 (0.00106)	-0.000646 (0.00111)	-7.03e-05 (0.00102)
Household size	0.00666 (0.00573)	0.00972 (0.00603)	0.0102* (0.00567)
Subjective ranking of PDS (high =1, low =0)	-0.0239 (0.0360)		
Wedge between allotment and entitlement in per capita terms		-0.0367*** (0.00887)	-0.0491*** (0.00976)
Constant	0.620*** (0.125)	0.397*** (0.137)	0.362** (0.152)
Observations	1,424	1,238	1,237
R-squared	0.112	0.140	0.354
Robust standard errors in parentheses			
*** p<0.01, ** p<0.05, * p<0.1			

7.2.3 Product Portfolio 3: Preferences for coarse cereals

Under the provisions of NFSA, rights-holders of the PDS are also entitled to 5 kilograms per person per month of coarse cereals at INR 1 per kg, but this is conditional on the demand from the women of the household. The state will provide for it if there is a demand from the rights-holders. On being asked about their preferences for coarse cereals like pearl millet (*Bajra* in Bihar), most respondents said that though they knew that it was nutritious, and that their grandparent's staple diet was *bajra*, they however said that it is generally consumed by the very poor in the village. Those who cannot afford to buy white fine rice, eat *bajra*, the respondents from Bihar opined. The social stigma associated with consuming coarse cereals was quite strong. Eating fine white rice, and not coarse cereals is a marker of social status. Pearl millet is branded as poor man's crop in Bihar.

In Bihar, also, most women respondents said that preparation of bread or other items from *bajra* is highly labor intensive, hence the demand for coarse cereals was low due to this reason as well. Millers have not devised an easy way to grind it. So ultimately it will come on women to get it ready for cooking. While in UP related and similar stories were recounted regarding coarse cereals, in Odisha respondents seemed more favorable towards it if it is included in the PDS basket as an additional commodity. "*Anything additional is always welcome*", opined some of them. But they will "never" spend money to buy from open market, they added.

7.3 Preferences about delivery mechanisms

What form of assistance, cash, near-cash transfers such as vouchers, or in-kind is optimal or desirable – remains highly contested in the literature (Hidrobo 2014). The debate between cash and in-kind transfer has always been "polarized and acrimonious" (Devereux 2006). Broadly, two lines of arguments characterize the debate regarding the ideal delivery mechanism for the PDS. The first supports a gradual move towards a system based on food coupons or outright cash transfers, either of which could be used at private retail stores like a standard food stamp (Kotwal et al. 2011; Chaudhuri and Somanathan 2011). The alternative argument supports reforms of the existing PDS itself (Khera 2011), based on

monitoring and enforcement, and expansion of coverage well past the current BPL population, making it more extensive as well as more generous. Since, the second option comprises retaining the PDS core structure intact, the nature of transfers is retained to be in kind.

Cash transfer is not the only alternative disbursement mechanism that is being debated or is under consideration or has been tried in Indian states. Food coupons have either been tried as or have been in consideration elsewhere. Bihar has experimented with food coupons (see Pritchard and Choithani 2015 for an evaluation of coupon-based PDS in Bihar). The Bihar arrangement however had food coupons redeemable only in PDS shops and had no validity outside. I study preferences asking respondents to choose between the three options of Food coupons, current PDS system and Cash transfer.

Conceptually, cash transfers should be strongly preferred by the rights-holders. If entitlements are protected (for example from price fluctuations) and there are reasonably small direct or indirect costs in accessing cash, by widening the choice set, cash transfer should be strictly preferred over in-kind transfer. However, the choice is not so straightforward and there are several implementation issues, socio-economic contextual as well as capacity issues that can determine the choice of the delivery systems for food subsidy. For example, if there is little experience in handling cash, there might be reservations about a DCT system.

Though the system of DCT for welfare programmes is still in nascent stage in India (example-old age pension, widow pension), evidence from rest of the world show the potential for significant benefits. There is a big strand of literature that argues in favor of cash transfer as the most preferred mode of resource transfer in any social welfare intervention. Gentilini (2007), for example cites that in the year 2006 nearly “50 cash papers” were presented in various conferences.

One of the biggest and successful DCT programmes is Brazil’s ‘Bolsa Familia’, covering more than 11 million households to deliver educational subsidies. Subsequently, it included few more services like food and fuel to 2.6 million households in Brazil. Soares (2008) shows that Bolsa Familia was responsible for 12 percent reduction in poverty. Also, Brauw

et al. (2014), in their analysis of the same programme in Brazil, observe that CCT directed at women rights-holders, especially in urban areas, is an effective way of giving more voice to women in household decisions. Similarly, the Mexican government also started the principal anti-poverty DCR programme Oportunidades in 2002 that achieved some success in impacting education, health, and nutrition outcomes of children (Rawlings and Rubio 2003; Behrman 2010). For the poorest 5 percent of the population, in both Brazil and Mexico, transfers amount to 10 percent or more of their total income. Thus, bottom-sensitive measures of poverty reveal a greater impact of DCT.

In November 2012, the Indian government announced that many subsidy programmes such as scholarships for poor students, LPG and kerosene subsidies, pensions and employment guarantee scheme payment would be converted into DCT in a phased manner starting in January 2013 (see Barnwal 2016 for LPG subsidy). All these programmes were directed towards the poor or vulnerable with a primary objective of poverty elimination.

Food subsidy in the PDS is not yet a part of the proposed switch towards a DCT. However, some states, such as Bihar, Andhra Pradesh, Madhya Pradesh and Delhi, are conducting pilots to assess the institution of DCT. An earlier pre-pilot study in rural and urban Bihar, strongly suggest, that more than 95 percent respondents are interested in DCT.⁶⁴ However, the study did not conduct a formal analysis of the factors determining preferences, something that I set out to do in this thesis. A study by SEWA (Self Employed Women Association), Delhi (2009), about the preference of cash transfer over the PDS among 150 households in three localities in Delhi with high degree of SEWA concentration, the study finds that 60 percent households prefer DCT over PDS. This could result from confidence and knowledge generated particularly in SEWA.

Khera (2011) analyses the preference for cash transfer and PDS through surveys in 9 Indian states in rural areas (Andhra Pradesh, Bihar, Chhattisgarh, Himachal Pradesh, Jharkhand, Odisha, Rajasthan, Tamil Nadu, and Uttar Pradesh).⁶⁵ Her main finding is that households

⁶⁴ Also refer Murlidharan, Niehaus, & Sukhtankar (2011) paper on assessing the scope for Cash Transfer in lieu of the TPDS in Rural and Urban Bihar

⁶⁵ In Bihar and Uttar Pradesh, around 54 percent and 34 percent households prefer cash transfer scheme while just 2.1 percent in Chhattisgarh. Chhattisgarh, widely known as the ideal for the resurgent PDS with 90% of respondent prefer PDS over Cash transfers (Khera, 2011).

usually receive 84-88 percent of their entitled amount where the PDS functions well. Households tend to prefer existing PDS over a DCT if PDS is functioning well. Though my survey also has similar findings, I examine and demonstrate other nuanced factors that underline the reasons for the differentiated preferences of the rights-holders (which I discuss below).

7.3.1 Transfers and levels of food consumption

Following Southworth (1945), the degree to which food in-kind transfer influences actual household consumption behavior hinges on whether the food assistance is inframarginal (in other words, the ration is less than what would normally be consumed without the transfer). Economic theory suggests that if the transfer is inframarginal, it would result in the same additional food purchases as a cash transfer of equal value. The in-kind transfer has only the income effect (as in the case of any cash transfer), and the price incentive effect at the margin is lost. The in-kind transfer is extramarginal if the transfer is greater than the amount the household would have consumed without the ration. Here, the transfer may have both income and a substitution effect.

Devereux (2006) in his assessment of the type of transfer of resources to the poor, makes an argument in favor of DCT in lieu of in-kind transfer, debunking the assumption that with cash transfer men will squander away the money and use it on non-essential items. He further reiterates that “both the assumptions are questionable”. He argues that in poor households, men often prioritize the basic needs of their families over their own. Similarly, Cunha (2014) using a randomized controlled trial of Mexico’s food assistance programme examines the differential effect on consumption induced by in-kind transfer and equal-valued cash transfer and finds no difference. Interestingly the study finds that majority of cash transfer spending was on nutritious food items (like fruits and vegetables), specific evidence against assumed adverse effects of cash transfers.

Adams and Kebede (2005, pp.1), in their evaluation of cash transfer in the Highlands of Ethiopia, find cash transfer to be more effective and cheaper than food transfer (“Between 6 percent and 7 percent cheaper than local food purchase”). In addition, the evaluations also find that when cash payments “exceeded their minimum needs”, the beneficiaries’

investments were more “strategic” that enhanced their monetary outcomes. Improved diet diversity, caring practices and access to social services were some of the other benefits.

Harvey and Bailey (2011, pp. 7) observe similar results in several evaluation studies of cash versus food aid and note “cash to be more effective than food aid in increasing dietary diversity”, including having “a positive influence on caring practices”. Citing the example of Ethiopia, the authors also observe that those households that received cash transfers “fed their children more frequently”, and that the food was more diversified. Farrington et al. (2005, pp. 4) too argue in favor of cash transfer and note that “allowing people to exercise choice, they switch emphasis from the supply to the demand side”. However, he proposes certain “preconditions” for example judicious use of conditionality, judicious use of targeting, simple delivery mechanisms and robust monitoring and evaluation systems.

Dutta et al. (2010) comparing India’s social pension schemes and the PDS find that leakage in the former is comparatively low, and funds do reach the vulnerable individuals. The authors also observe that accessing pensions can be a painful process involving registration but once done, benefits tend to flow automatically while in the PDS every extraction of benefits from the system requires effort and is a potential rent-seeking opportunity.

Brière and Rawlings (2006) examine the relevance of conditional cash transfer (CCT) in combating poverty and fostering social inclusion and argue that CCT not only seeks to address short term consumption needs but is built on the tenet of linking cash to behaviour by providing money to the poor families. This is contingent upon certain verifiable actions like school attendance or basic preventive health care.

Harvey (2005), in his review of different forms of transfer finds cash and vouchers to be eroding food transfer in most countries, and that people rarely use cash for anti-social purposes, and that women are not necessarily disadvantaged using cash rather than in-kind approaches. Hidrobo et al. (2014) use randomized evaluation design in Ecuador to compare the impacts and cost effectiveness of cash, food vouchers, and food transfers. The authors find that the all the three modalities significantly improve the quantity and quality of food consumed. However, they also observe that the food consumed with food transfers leads to a larger increase in calories consumed while vouchers lead to an increase in dietary-diversity. They also assess the rights-holders’ preference for the mode of transfer and find cash transfer

most preferred due to the autonomy that comes with cash. Gentilini (2007) however qualifies that beyond autonomy cash also transfers the risk of supply failures.

Ahmed and Shams (1994), in a study in Bangladesh, examined the cost-effectiveness of cash versus food-based programmes in two public interventions that included, 1) Food for work that distributes wheat as wage payment, 2) while the other Rural Maintenance Programme (RMP) pays cash. The results suggest that the “marginal propensity to consume food (MPCF) out of cash income transfer from RMP is 0.48, while the MPCF from wheat income transfer from the Food for work is 0.61. Ahmed et al. (2009), in later study of four different social safety net programmes assess the relative merits of food and cash transfers in improving food security and livelihood of the ultra-poor in Bangladesh. The authors find that with increased income the beneficiaries’ preference for food declines (poorest households prefer only food as the transfer). Hence, it seems that poor tend to have a higher MPCF out of food transfers than cash transfers or increased cash income. This phenomenon is termed as the ‘cash-out puzzle’.

Better-off rights-holders tend to prefer only cash while preference for the combination of food and cash transfer is unrelated to income. Moreover, married women have better empowerment outcomes when they earn and control cash incomes, possibly because cash allows women to expand their area of decision making beyond their traditional roles as food providers and caregivers. Qualitative accounts, however, suggest that women still feel they have greater control over transfers of food and that they are concerned that cash transfers would be spent by their husbands. In the households of widowed, divorced, and separated women, however, having a food transfer (together with a cash transfer) assures the household of food while providing cash for other expenditures, given that these women are often the only source of support for their families.

Harvey et al. (2005), observe that though cash transfer has the potential to deliver measurable welfare benefits, policies should not be entirely driven by a give them cash rhetoric. Such policy must remove the structural and administrative constraints facing the poor. Fraker’s (1990) systematic review makes a case in favor of food stamps (over even cash transfers), showing that it leads to increased consumption of food and greater availability of nutrients. Yet, the estimated change in the intake of nutrients are far less definitive. The possible reasons as observed by Grosh et al. (2008) could be that households do not treat food stamps

in the same way as cash. Another is that the stamps may fall under the control of women, who disproportionately favor expenditures on food and other basic needs.

Akin to research in this chapter, Gentilini (2007) reiterates the importance of rights-holder preferences as one of the cornerstone of understanding the appropriateness of transfers. Programme objectives, economic analysis, market assessments, capacity requirements and beneficiary preferences play important roles in the cash/food selection. Additionally, the beneficiary preferences for cash or food are context-specific and hence difficult to generalize. Gentilini (2007) argues, if there is a mismatch between preference and provision, the resultant transfer may not serve its purpose. Harvey (2005), argues that cash and food should not be an either/or choice, rather they could complement vouchers that are restricted to commodities, such as food or seeds, may be more effective than cash if the objective is not just to transfer income to a household, but to meet a goal, such as improving nutrition or boosting agricultural production.

Balasubramanian (2015) examines the NSS data for the period 1999–2000 to 2009–2010 and finds that higher PDS subsidies have failed to raise cereal consumption, despite coinciding with both a rise in real incomes in poor families and a relative fall in the market price of cereals. With the subsidy leading to adjustments on both extensive and intensive margins, the result is a status quo. If the objective were to increase consumption amid changing preferences it is not clear if a cash transfer or a voucher or in-kind subsidy would make a difference.

Matteis (2014) however shows that the success of both transfer modalities is affected by contextual factors. Analyzing the case of beneficiaries in Africa, the preference for cash depends on the existing market structure implying a need for contextual adjustments depending on the heterogenous nature of the intervening area. Similar observations are in Harvey and Bailey (2011), that appropriateness of cash transfers depends on needs, markets and other key factors, all of which vary by context. DFID (2011) provides a synthesis of the impact of cash transfers in developing countries. It considers inevitable trade-offs, for example, between targeting and keeping administration costs low. While food stamp in lieu of cash transfer is proposed as an alternative to food rationing, but adjustments are needed for example in accounting for inflation.

7.3.2 Quantitative analysis of the preference for delivery mechanisms

7.3.2.1 Profile of households in the sample relevant for choice

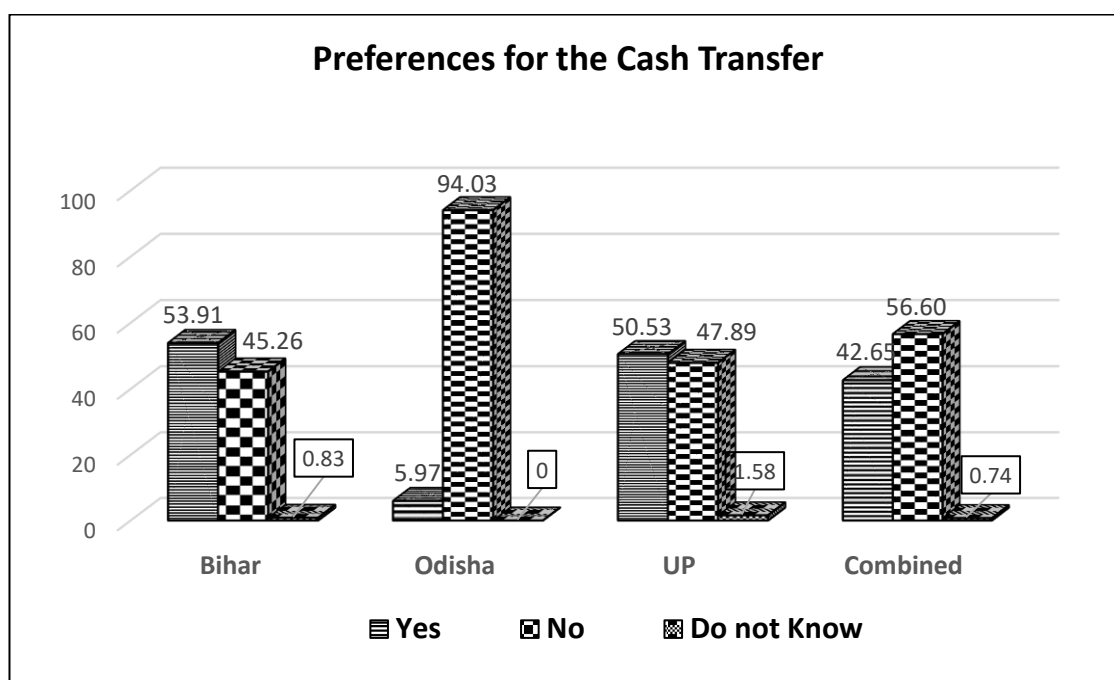
Family size has a direct relationship with food demand and therefore engagement with PDS and its experience. The average family size of the sample across different caste categories is around four members per household in Odisha, six members in UP, and six members per household in Bihar. Households in Bihar and Eastern UP thus have a greater requirement for food grains (see chapter 3, section 3.5). Further, while only about 6 percent in Odisha reported migration in the last one year, the situation is quite different in UP and Bihar; 20 percent and 27 percent respectively. Male migration often leads to women headed households who face different conditions when accessing the PDS.

This heterogeneity has important implications where landlessness or small landholdings result in greater stake in PDS as a supplier of food. Land is also a very important source of economic and political power for the rural households and influences their dealings within the PDS system.

7.3.2.2 Preferences for Cash transfer, Food Coupon, or Existing PDS

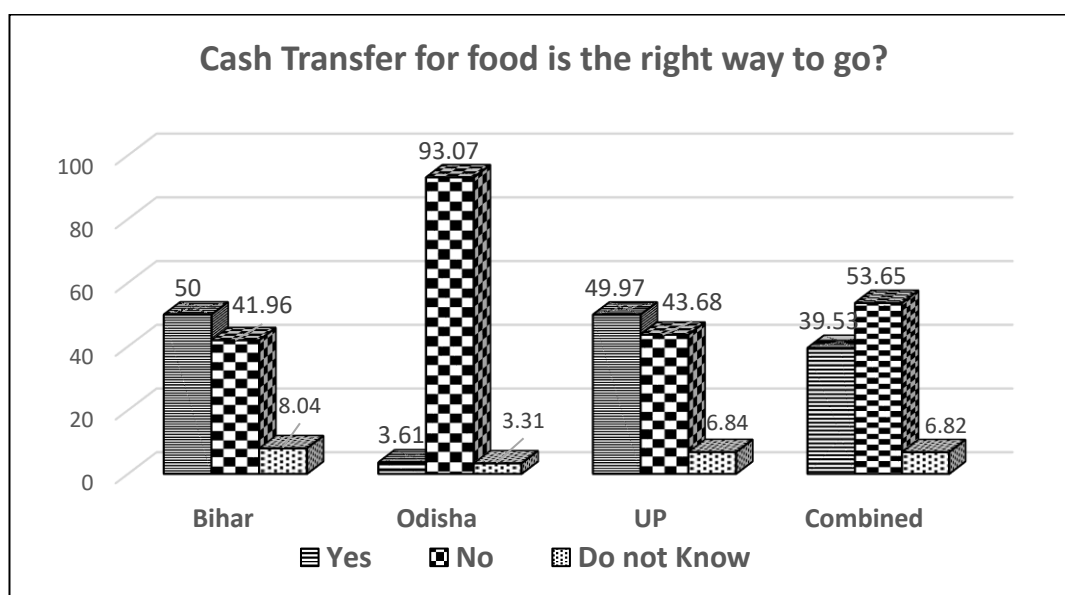
On the question of the choice between the current in-kind transfer system of PDS and DCT the responses from these three states seemed quite diverse.

Figure 22: Overall Preferences for Cash transfer equal to market value of food grains



In tribal districts of Odisha, 94 percent do not prefer cash transfer over PDS, and 92 percent feel that cash transfer is not the right way to go in future either (Figure 22-23). The Odisha sample covered remote tribal areas that lack outlets other than the PDS. In UP the responses are divided, with around 51 percent preferring cash transfer while 48 percent do not seem in favor. Given the prospective nature of cash transfer, it is remarkable that the majority in Eastern UP preferred cash over in-kind transfer. In addition, while nearly more than half of the respondents think cash is the right way to go in future, 44 percent think otherwise. In Bihar as well, nearly 54 percent favor DCT and almost 50 percent think that cash is the right way to go. In the combined data, nearly 43 percent of respondents do prefer cash transfer over PDS and around 40 percent think that cash transfer is the right way to go (Figure 22-23).

Figure 23: Cash transfer for food as the right way to go in future: Percentage preferring



Recall that in the sample approximately 30 percent households are female headed (Chapter 3, section 3.5). Generally female go to the FPS to get the ration. It is important to see their preference for cash transfer as they interface with the existing PDS system most closely. In Bihar an equal 54 percent of male and female headed households prefer DCT while in eastern UP 53 percent female headed households prefer cash transfer (Figure 24). In Odisha, the preference for cash transfer is very low.

Figure 24: Female and male headed household preference for cash over in-kind transfer

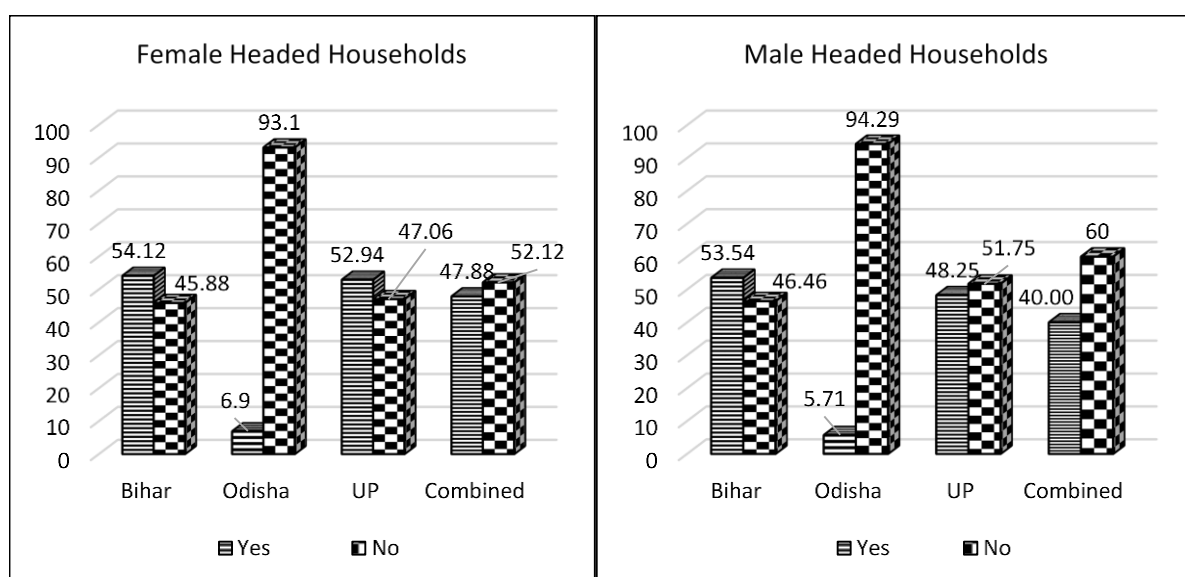
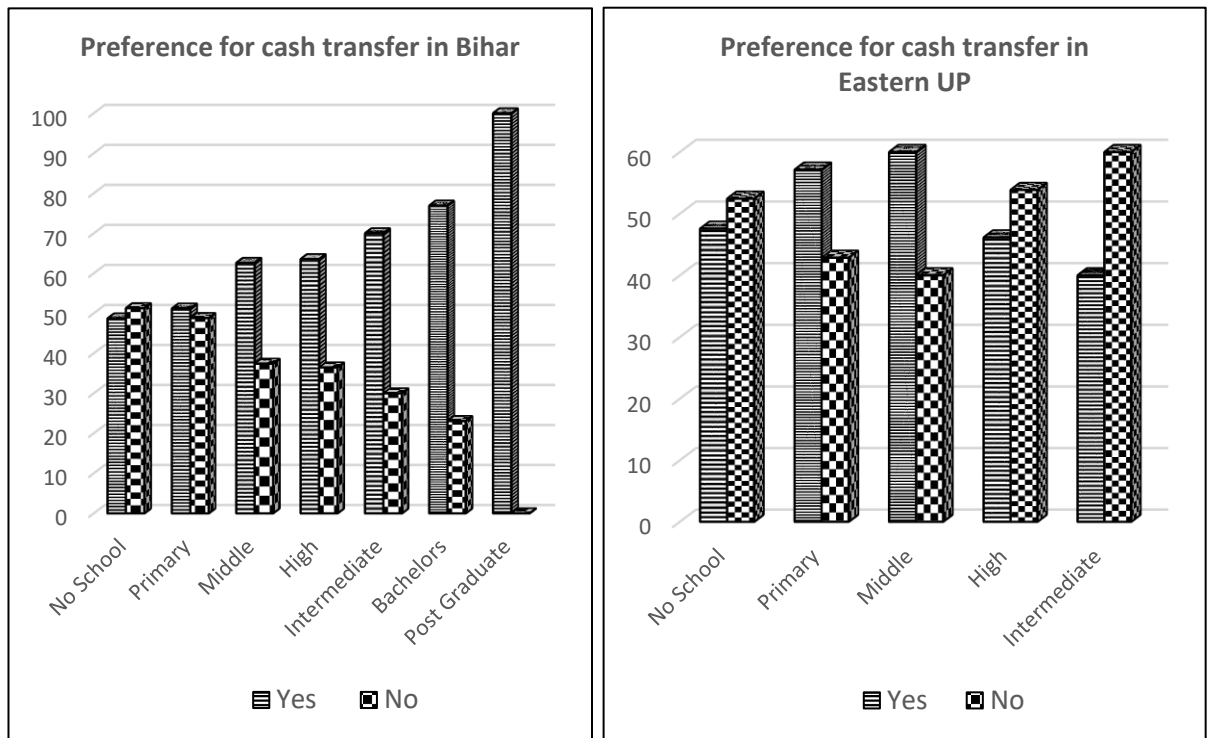


Figure 25: Preference for cash transfer: by education



Lack of awareness and understanding of cash transfer is also a factor underlining the preferences over delivery mechanisms. Indeed, preferences for cash transfer in Bihar show a clear trend: as education level increases, preference for cash transfer also increases in tandem (Figure 25). Especially striking is near hundred percent preference for cash transfer among post graduates in Bihar. The relationship in Eastern UP sample is not clear cut but the sample sizes for high school and beyond educated is quite small in eastern UP.

7.3.3 Insights from Qualitative analysis for preference of Cash transfer vs In-kind

Qualitative analysis across the four villages’ in Odisha shows that most households did not prefer cash transfer over PDS. This is partly attributable to lack of awareness among rights-holders about how banks operate resulting in a fear of the unknown. Also, in the surveyed areas, the bank density is quite low. Additionally, there have been prior experiences feeding into this fear. In 1989, Indian government launched the programme ‘Shelter to all’ under *Indira Awas Yojana* (IAY). In some Odisha villages, rights-holders did not receive money that was promised for building houses.

Additionally, the respondents were apprehensive, of having to pay commission to the bank officials. They also thought that money might be misused, not just by men in buying local alcohol but also by women themselves who were addicted to local tobacco. For PDS ration, one may go once a month to FPS for collection, but with cash, two activities are needed: once to the bank to withdraw, then to the market to buy the ration. Since banks are far away (on average 9-18 kilometers away in these villages), this translates into spending on transportation. Travelling and queuing up to claim their entitlement obviously involves both the opportunity cost in terms of foregone income opportunities and the time involved in the process. Further cash transfer, if not price indexed, will result in paying up from their own pocket for the same amount of food. In UP, for those who did not prefer cash transfers, the reasons cited were almost like what has been cited by the Odisha rights-holders (unfamiliar with how banks operate etc.).

In Bihar even across social groups and gender there was a clear preference for cash, and most demand was from women themselves. Cash, followed by food coupons, was their clear preference. But women were also careful in mentioning that cash should be transferred in the name of women, otherwise men could spend on other things. Some also said that cash will be good since they will have a bank account in their name: *“apna khata hoga”* (have our own bank account). Generally, most respondents care about minimizing the interface with the dealer irrespective of the delivery system. Further, women respondents strongly refuted the notion that domestic violence would increase with DCT. *“When there is nothing to eat at home, which husband will behave that way? After all he too must eat”*, said one of the respondents. Another said, *“Marital discord is part of our marital life, it does not change with the meagre sum that the government will transfer for food.”*

Importantly, minority women (Muslims) seem more vocal in favor of cash transfer. Since for many Muslim women, their husbands worked in Gulf countries as migrant workers, they were equipped to manage their home single-handedly, and could draw money from the bank. Moreover, since socially they feel a bit inhibited to go to the ration shop, especially the younger women, and that it is generally the mothers-in-law who must go, carry the load, they felt cash was a comparatively good option. Though most women showed a clear preference for cash some caveats followed: concerns around price indexation, whether it will be disbursed monthly or in one go, whether they will have to pay to open an account or not.

Majority preferred an alternative to PDS, yet some did want to give the PDS a chance to improve, and if it still did not get its act together, they would prefer cash. Their major concern was that for cash they must spend the whole day in the bank. As one female respondent said, “We have so much work. To collect from ration shop is easier, as here, anybody can go and collect. To go to a bank, I would have to go personally since the account will be in my name.”

7.3.4 Reasons for preferring cash over in-kind transfer: An ordered choice problem

With a sizable fraction of the respondents revealing a preference for cash transfer in both Bihar and Eastern UP, through surveys I explore the possible reasons for preferring DCT. I recorded the responses on a Likert scale with rank 1 being the highest and rank 5 the lowest in the order. The summary results of recorded reasons for preferring cash over in-kind transfer are presented in Table 28 below.

Table 28: Reasons for preferring cash transfer system. Percentage of respondents who ranked at the specific level as per their preference

	<i>Rank 1</i>	<i>Rank 2</i>	<i>Rank 3</i>	<i>Rank 4</i>	<i>Rank 5</i>
It's easier	71.53	12.68	11.24	4.07	0.48
Money can be used the way we want to	24.2	45.65	23.78	5.52	0.85
I can buy better quality food since PDS quality is not good	21.92	39.42	33.85	3.85	0.96
If the money gets transferred automatically then I do not have to deal with officials	7.34	24.31	27.52	37.61	3.21
Money transferred in banks helps in planning what to spend what to save	5.34	17.48	35.44	28.16	13.59
I can have better proof if entitlements are not provided	35.71	16.84	8.67	27.04	11.73

Some of the reasons cited for preference of cash are: it is “easier to access, followed by “I can have better proof if entitlements are not provided” “money can be used the way we want to” and “I can buy better quality food since PDS quality is not good”. These comprise essentially the arguments on the lines of widening the choice sets because of DCT (table 28). Note that in both Bihar and UP, majority of respondents think minimization of interface with the dealer as one of the primary reasons for preferring cash.

Yet, on the other hand, reasons cited for not preferring DCT comprise the tribulations reflected in the following: “Money unlikely to come in time”, “Purchasing power will not be preserved as price change will not be properly accounted for”, and that “cash transfer can be misused” (table 29). Based on gender disaggregated data, for most women in Bihar, one of the primary reasons for not preferring cash is because “Bank would create problems in disbursing including their cut” and followed by a significant percentage who think that “Money is unlikely to come in time.

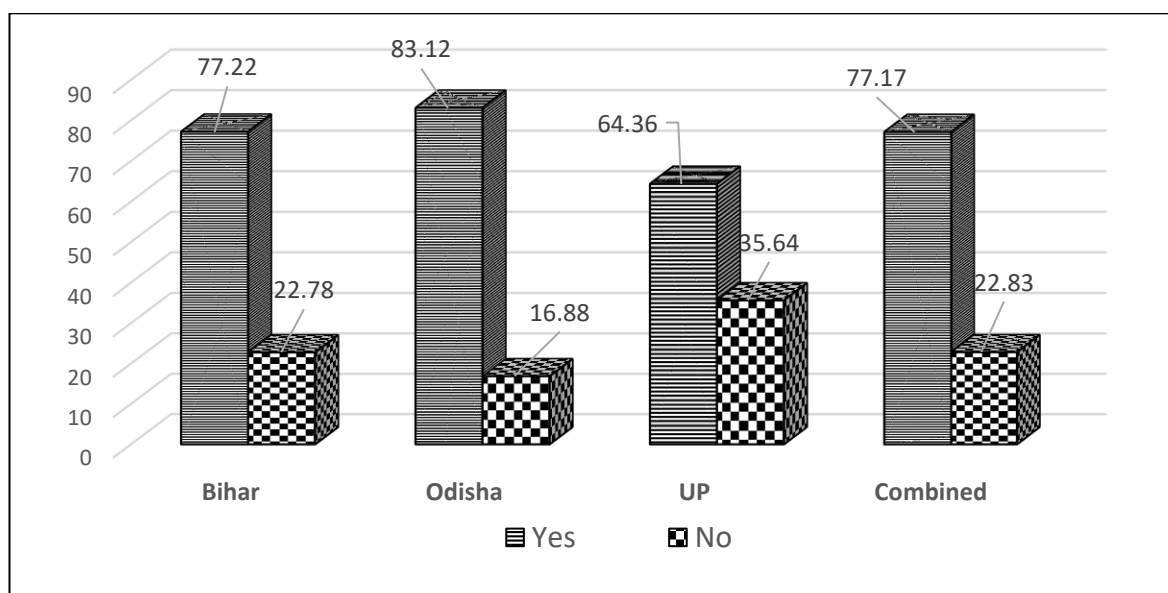
Table 29: Perceived problems in cash transfer system for food (entry indicates what percentage respondents assigned the specific rank)

	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6	Rank 7
Money unlikely to come in time	48.75	28.19	14.49	5.67	2.64	0.26	
Bank would create problems in disbursing including their cut	37.72	39.79	14.19	5.02	2.94	0.17	0.17
Purchasing power will not be preserved as price change will not be properly accounted for	37.24	27.29	27.56	6.55	1.36		
Cash transfer can be misused	41.02	27.43	18.93	10.32	1.82	0.36	0.12
Getting money is unsafe	12.04	28.01	30.89	14.92	13.09	1.05	
Dealing with banks is complex with too many formalities	12.39	31.33	26.23	14.94	6.92	7.1	1.09
Cash transfer system is unknown to me so lot of uncertainty	17.06	21.76	20.88	12.35	9.12	6.76	12.06

7.4 Other delivery system: food coupons

Apart from DCT, another change possible is employing a food coupon system. I next investigate the preference not for the Bihar-type food coupon (the system has been discontinued now) but a system akin to a food stamp program that can be used across FPS and non-PDS outlets as well. In that sense, it is like the cash transfer in terms of expanding the opportunity set but in a comparatively limited context.

Figure 26: Preferences for the food coupon



While there is mixed preference for cash transfer, there is a clear-cut preference for food coupon in all states. In Odisha, around 83 percent households prefer food coupon while in Bihar, it is around 77 percent (Figure 26). In eastern UP preference for food coupon is little less compared to other states. Qualitative analysis shows that in Bihar, there was a clear preference for food coupons that can be used to buy food grains from any grocery store including the PDS. However, across all states there was apprehension if the stores in the open market would acknowledge these coupons. With cash, some respondents expressed that DCT might tempt them to use for repaying their loans, hence food coupons could be a preferred mode.

7.5 Experiences in PDS and preferences over delivery mechanisms

Figure 27 shows the ranking of PDS in terms of experience of shopping at PDS. Less than 5 percent households rated PDS as “Very Good” in all states. Approximately 49 percent households from Odisha rated as “Good” and around 42 percent rated as “Average” while 37 percent households from Bihar rated as “Good” and 36 percent as “Average”. Very striking around 50 percent households in eastern UP rated shopping at PDS as “Very Poor”.

Figure 27: Ranking PDS in terms of experience in shopping at PDS

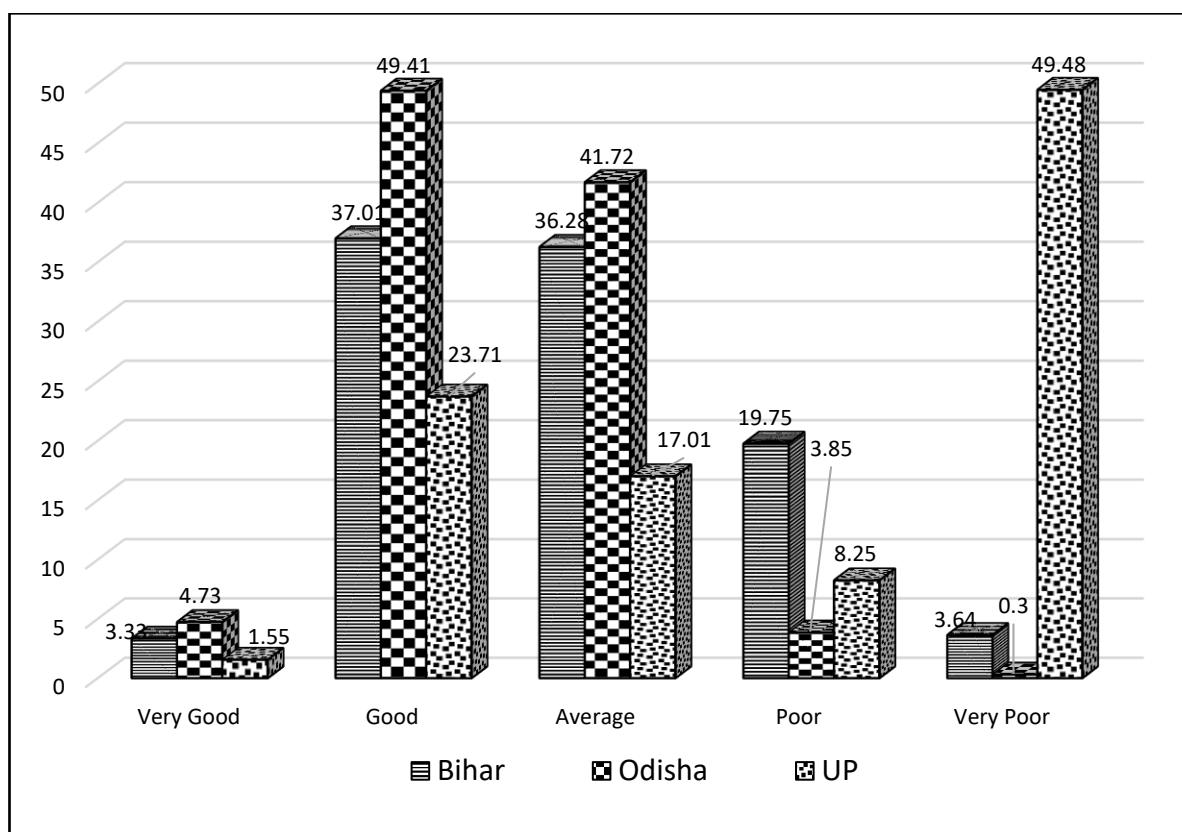
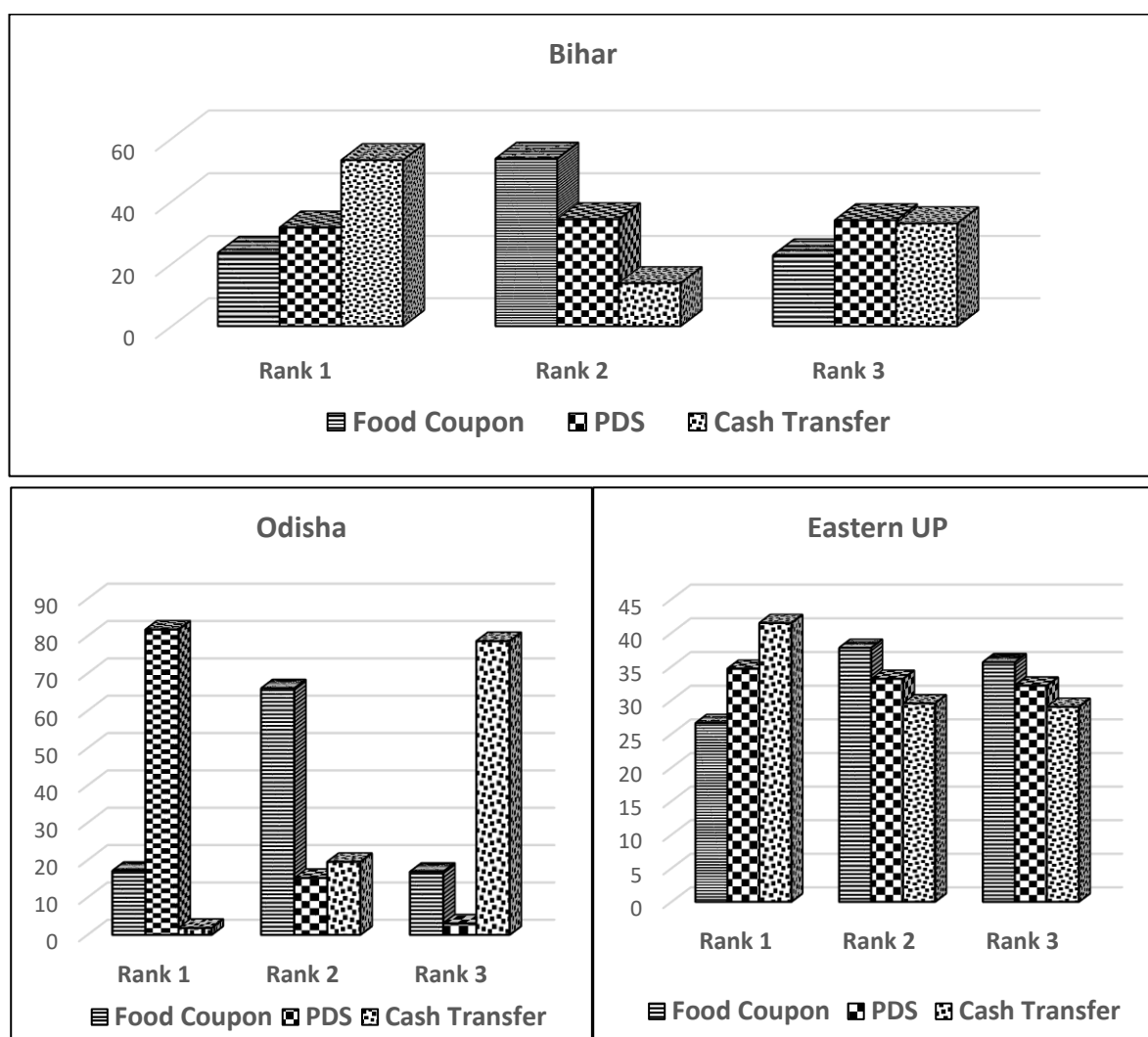


Figure 28: State-wise ranking among preferences of food coupon, PDS, and Cash Transfer



With these experiences with the PDS as base, looking at the responses across the states, in Odisha a significant 80 percent preferred PDS as their first choice, followed by food coupons and cash transfer. This is understandable given that around 49 percent respondents felt that PDS’s performance has improved overtime in meeting needs. However, a slightly different pattern was observed in UP: 41 percent respondents prefer cash transfer as their first choice (Figure 28). This might not be surprising, considering that nearly 62 percent respondents reported that performance of PDS in meeting their needs has not improved over the years hence the quest for an alternative. Yet, 35 percent respondents continued to prefer PDS as their first choice, followed by food coupons. The preferences of these households concur with proponents for preserving the basic PDS structure who argue, in part, that the PDS

insures households against increases in food prices in a way that cash transfers may not, and that cash transfers may encourage even greater corruption at the local level.

In Bihar, with a historically badly governed PDS, there is a clear preference for DCT with 53 percent stating this as their first choice, followed by food coupons and PDS, 31 percent respondents continue to most prefer the PDS. The revealed preference for cash in Bihar is much stronger and because of a comparatively tribal and relatively poorer Banka district the figure comes to 53 percent. The remoteness and tribal population the same kind of preferences are also obtained from the survey in Odisha. A comparatively low access to markets could explain this difference.

Considering that Bihar has undergone several reforms in PDS over the years in improving its performance, (75 percent respondent reporting improvement in PDS performance), there is also an indication that much still needs to be done if the current in-kind transfer as in PDS were to continue.

7.6 Regression Analysis for preference over delivery mechanism

In this section, to further understand the preferences in the delivery mechanism, I use simple regression analysis. I use the binary choice probit model. The dependent variables are binary choices as follows:

- (i) “preferences for cash transfer system”,
- (ii) “preference for Food Coupon” and
- (iii) “preference for the existing PDS”.

The dependent variables are dichotomous (0-1) rather than continuous, ordinary least squares becomes an inefficient estimation technique, and the underlying linear probability model (LPM) that is being estimated represents a poor a priori choice of model specification (Aldrich and Nelson, 1984). The common solution to the deficiencies of the LPM model as estimated via OLS to adopt a different model specification.

The probit model assumes that while we only observe the values of 0 and 1 for the variable Y, there is a latent, unobserved continuous variable Y^* that determines the value of Y. we assume that Y^* can be specified as follows:

$$Y_i^* = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_k X_{ki} + \mu_i \quad \dots (6)$$

And that:

$$\begin{aligned} Y_i &= 1 && \text{if } Y_i^* > 0 \\ Y_i &= 0 && \text{otherwise} \end{aligned}$$

Where X_1, X_2, \dots, X_k represents vectors of random variables, and μ represents a random disturbance term.

Now from equation 1,

$$\Pr(Y_i = 1) = \Pr(\beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_k X_{ki} + \mu_i > 0) \text{-----}(7)$$

Rearranging terms,

$$\begin{aligned} \Pr(Y_i = 1) &= \Pr(\mu_i > -(\beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_k X_{ki})) \\ &= 1 - \Pr(\mu_i < -(\beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_k X_{ki})) \\ &= 1 - F(-(\beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_k X_{ki})) \end{aligned}$$

Where F is the cumulative density function of the variable μ . If we make the usual assumption that μ is normally distributed, we have:

$$\begin{aligned} \Pr(Y_i = 1) &= 1 - \Phi(-(\beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_k X_{ki})) \\ &= 1 - \Phi(-\mathbf{X}_i \beta) \\ &= \Phi(\mathbf{X}_i \beta) \end{aligned}$$

Where Φ represents the cumulative normal distribution function.

I run regression as three separate equations. The independent or explanatory variables, which are used to explain why some households prefer/do not prefer cash transfer, food coupon, and existing PDS, include Female Headed Household (FHH), education level, social group, and landholding size. The main variable of interest is wedge defined as the difference between entitlement and what household gets from PDS. For example, AAY households are entitled to receive 35 kg of food grains but they often get less than the allotted amount from PDS. So, the difference between their entitlement and actual amount what they are getting from PDS, is the wedge. My hypothesis is that as the wedge increases, the preferences for the food coupon and cash transfer system should increase.

Table 30 presents the results (marginal effect coefficient) of the probit regressions. With the main variable of interest i.e. wedge, the results strongly suggest positive correlation with preference for cash transfer and the food coupon. In the survey just, 40 percent (overall) households are getting the full entitlement. Just 18 percent households from UP are getting their entitlement while 35 percent households from Bihar.

Table 30: Preference for delivery mechanism

Dependent/Independent variables	Preference for cash transfer		Preference for food coupon		Preference for existing PDS	
	No FE	with village FE	No FE	with village FE	No FE	with village FE
Wedge	0.020***	0.021**	0.011	0.027***	-0.012*	-0.011
	0.006	0.008	0.008	0.008	0.007	0.008
Household size	-0.002	0	-0.022	-0.027	-0.027	-0.051***
	0.018	0.023	0.021	0.024	0.021	0.019
Female headed household	0.371***	0.382**	0.039	-0.016	-0.174	-0.137
	0.122	0.155	0.144	0.215	0.155	0.222
Schedule caste	-0.005	-0.021	-0.17	-0.074	0.152	-0.161
	0.143	0.199	0.194	0.231	0.18	0.184
Schedule tribe	0.222	0.342	0.164	-0.351	-0.263	-0.259
	0.208	0.264	0.198	0.271	0.234	0.371
General	0.350*	0.094	-0.346	0.24	-0.225	-0.609**
	0.21	0.134	0.275	0.282	0.253	0.238
Minority	-0.374	-0.111	-0.062	-0.388	1.493***	1.798***
	0.406	0.485	0.292	0.415	0.339	0.199
Primary Education	0.04	0.222*	0.088	0.07	0.09	-0.036
	0.096	0.113	0.143	0.149	0.131	0.157
Secondary education	0.264**	0.344***	-0.032	0.025	-0.1	-0.209
	0.103	0.111	0.102	0.15	0.1	0.136
Tertiary education	0.479**	0.504*	0.004	0.007	-0.253	-0.292
	0.208	0.263	0.209	0.236	0.213	0.294
Migration	-0.277	-0.309*	-0.183	-0.244	0.116	0.218
	0.17	0.183	0.203	0.235	0.201	0.258
FPS availability in their village	0.437***	0.789***	0.009	-0.084	-0.251	-0.011
	0.156	0.148	0.208	0.509	0.225	0.46
Aadhar card holder	-0.081	0.075	0.003	0.117	-0.018	-0.164
	0.18	0.179	0.172	0.221	0.115	0.14

Bank account holder	0.142	0.047	0.018	0.086	-0.181	-0.047
	0.13	0.18	0.184	0.214	0.191	0.168
Experience shopping at PDS	-0.219*	-0.152	0.028	0.198	0.433**	0.213
	0.122	0.141	0.196	0.221	0.177	0.2
BPL status	-0.101	-0.18	0.162	0.112	-0.092	-0.005
	0.154	0.198	0.16	0.192	0.161	0.23
How many months they get rice from PDS	-0.196***	-0.033	0.037	0.185***	0.147**	-0.034
	0.049	0.05	0.042	0.047	0.064	0.043
How many months they get wheat from PDS	0.156***	0.002	-0.007	-0.033	-0.162***	-0.008
	0.035	0.052	0.027	0.039	0.053	0.046
Know quantity	0.301***	0.311**	0.126	0.038	0.012	0.166
	0.099	0.124	0.152	0.202	0.127	0.143
Know price	-0.301***	-0.061	0.323*	0.213	-0.281*	-0.355***
	0.109	0.117	0.173	0.2	0.146	0.137
Use electronic	-0.552***	-0.031	-0.186	-0.236	0.614***	0.196
	0.104	0.144	0.139	0.148	0.137	0.157
Caste based discrimination	0.741***	0.397**	-0.157	0.183	-0.375*	-0.572***
	0.149	0.161	0.272	0.231	0.216	0.167
Gender based discrimination	-0.097	-0.123	0.545***	0.818***	0.406*	0.439*
	0.166	0.185	0.208	0.27	0.225	0.238
Total landholding size in acre	0.051**	0.042**	-0.021	-0.037**	-0.013	-0.014
	0.021	0.018	0.016	0.015	0.025	0.023
Same social group with dealer	-0.036	0.075	-0.07	-0.068	0.167	0.181
	0.096	0.113	0.124	0.134	0.114	0.127
Village fixed effect	No	Yes	No	Yes	No	Yes
Constant	-0.035	-0.082	0.319	4.595***	0.830*	0.283
	0.374	0.553	0.449	0.538	0.438	0.67
Number of observations	1192	984	1147	974	1123	902

Standard errors are clustered at village level p<10, * p<.05 **, p<0.01 ***

In the regression results, FHH strongly prefer cash transfer system compared to male headed households because if they have cash with them they can spend on things of their choice with the expansion of the opportunity sets. The regression results also suggest that education level plays a crucial role regarding the preference for DCT, but that there is no impact of social group for the preference of DCT and food coupon, and nor any significant association with homophily.

The regression results strongly suggest as the landholding size increases, the preference for DCT also increase but for the food coupon preferences, it is just the reverse. In other words, large farmers prefer DCT while small farmers prefer food coupon system. The results also suggest that if there is discrimination based on caste, people are more likely to prefer DCT. Note, besides other factors, in Bihar quality of rice came up as a major issue in favor of cash transfer during my qualitative research.

Another element in choices over delivery mechanisms relates to the beneficiary/rights-holder selection. To minimize ghost cards and mistargeting the government has been thinking of employing different beneficiary/rights-holder selection mechanisms i.e. choosing rights-holders based on exclusion criteria as opposed to the current inclusion criteria. What are the stated preferences of the rights-holders in this regard?

7.7. Selection Mechanism: Preference of the selection mechanism (exclusion vs inclusion criteria)

Identification and classification of rights-holders is crucial to fulfil the goals of the PDS. However, several studies show gaps in implementation. One of the challenges pertain to the inaccurate identification of households. Studies show that PDS suffers from both exclusion and inclusion error of rights-holders, i.e. the misclassification of the poor as non-poor and vice versa (Swaminathan and Mishra 2001; Hirway 2003; Khera 2008; Planning Commission, GOI 2005)

Some of these errors result from imperfect system rules, such as the infrequent updating of BPL status, but deliberate actions by local elected officials also play a role. These officials face a clear trade off: They can gain political support by targeting households who are likely

to benefit from grain access; at the same time, they may benefit financially from the second form of leakage, which would push them to target households who are less likely to use the benefit.

As per the report of NCAER (2015), the Government of India uses criteria such as income, expenditure, land holding and ownership of assets to identify the target households. Three rounds of the BPL census were conducted until 2007—in 1997, 2002 and 2007. States also used their own criteria as needed to categorize the poor households depending on the economic conditions. The report further states that post the roll out of NFSA in 2013, there has been a transition in the functioning of the PDS from a general entitlement under TPDS to food as a legal right under the NFSA 2013. With increased coverage under NFSA, the identification of poor households was re-identified.

The new categorization of priority households (PHH) under the NFSA includes families below the poverty line and a proportion of families that previously belonged to the APL category: while the category of AAY or “poorest of the poor” remained the same. In Bihar PHH were identified following the state-specific identification survey conducted in 2011–12. The identification criteria are broader than the criterion of income/expenditure followed in the previous BPL censuses conducted in 1992 and 1997. The identification mechanism focuses on automatic inclusion criteria such as households without shelter, destitute living on alms, manual scavengers, etc.

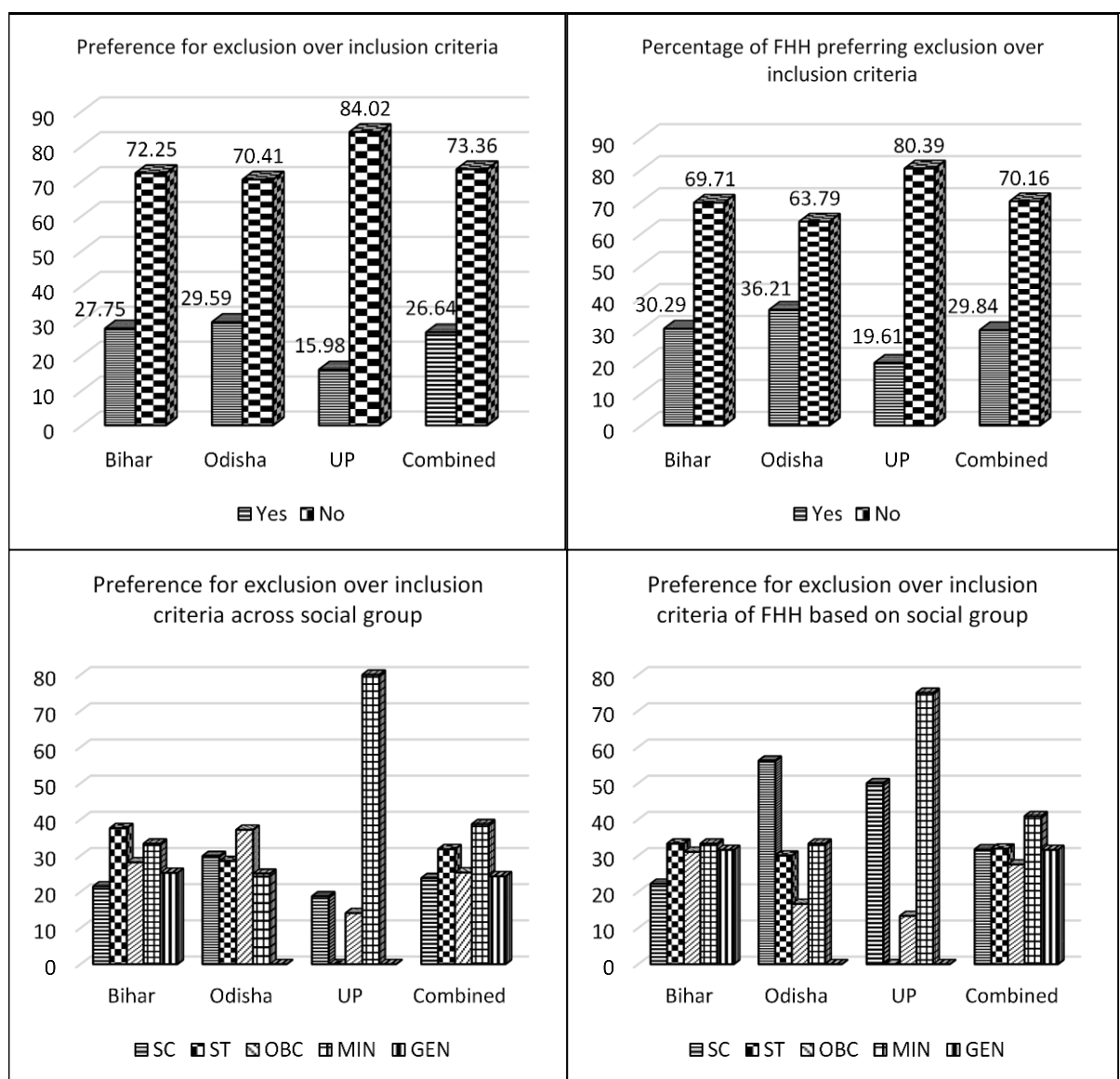
Ownership of land, durable goods, vehicles are also considered as exclusion criteria in addition to an income cut-off at the national level. Other states have targeted landless laborers, small and marginal farmers in rural areas and people associated with the informal sector, especially construction workers in urban areas, in addition to the other state-specific identification criteria. Like Bihar, while Odisha too has made a transition to NFSA, Uttar Pradesh is yet to switch to NFSA and, still follows the TPDS mechanism.

Since selection criteria is a critical input for the successful implementation of the PDS programme, one of the objectives of this research was to examine the rights-holders’ preference for the type of selection criteria that they would prefer.

Most of the respondents across states cited preference for inclusion over exclusion criteria. Examining the preference for the type of selection criteria for women specifically, it shows that majority of women respondents preferred inclusion criteria over exclusion, which is not surprising considering that the asymmetry of power is more in exclusion criteria, and that it is more prone to manipulation and it is applicable to few people only. This was more pronounced among widows/single and separated women.

Additionally, in the combined data for all states, majority of SC/OBC/minority women cited preference of inclusion criteria over exclusion across all the states, except for a slight deviation in case of FHH-minority in UP and FHH-SC in Odisha who seem to prefer exclusion over inclusion criteria, but this could be because of the low proportion of minority in UP and SC in Odisha represented in the sample (Figures 29).

Figure 29: Preference for exclusion over inclusion criteria across three states/FHH/social group/FHH-based on social group



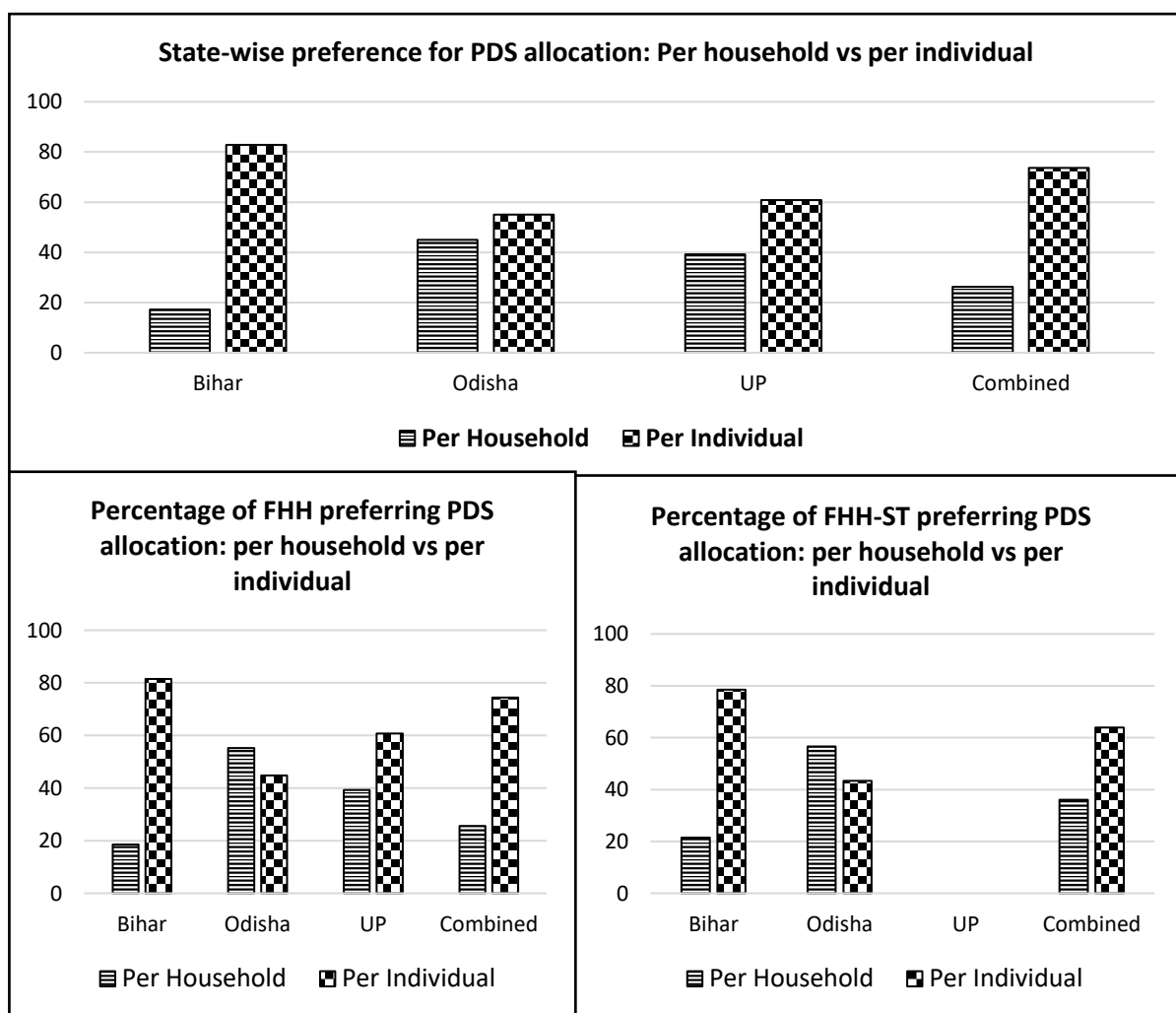
7.8 Disbursement mechanism: Should PDS allocation be individual basis or household basis?

Depending on the type of ration card, households may purchase their food grain from their assigned FPS. With implementation of the NFSA in 2013, entitlements for BPL (priority households) were changed from household (HH) to individual entitlements—that is, 5 kilograms of food grain per member of an eligible household. The existing AAY households

(or the poorest of the poor), will continue to receive 35 kg of food grains per household per month.

The preferences of the rights-holders around disbursement (i.e. Individual vs HH) for the BPL category seemed consistent with what has been proposed in the NFSA 2013 in both UP and Bihar, with slight variation in Odisha. 55 percent respondents in Odisha preferred PDS allocation on individual basis (i.e. per person) (Figure 30). A significant 45 percent of FHH respondents also seem to prefer per individual allocation of PDS grains (Figure 30). Additionally, FHH interacted with social identity show that ST-FHH in Odisha seem to prefer household basis for PDS allocation of grains, but a significant percentage also prefer individual basis (Figure 30). This trend may reflect comparatively large family size in Bihar and UP.

Figure 30: Preference for PDS allocation: per household vs per individual



Further, I also examined the issue of seasonality. In agrarian rural households, own supply of food varies across months, being highest near harvest and then depleting continuously over time until the new harvest comes through. Hence, the need for PDS as a source would vary over time within a year itself and the extent of shortfall would depend on household's endowments of factors such as land and labor.

However, the current system of allocation in the PDS is set as same amounts being disbursed to the households each month unless there is a policy change or any switch in household's categorization (for example some households moved from being listed as APL to BPL or AAY households). With aggregate PDS ration allocation being same over the months, a natural question that arises from the point of view of needs and preferences is the following: do the rights-holders prefer a higher quantity of rice or wheat during lean season (mainly away from harvest) and lower quantity near to harvest.

From the point of view of consumption smoothing it seems natural that such an arrangement would be preferred. However, my survey found that around 93 percent of respondents in Odisha preferred PDS allocation to equal each month and not differ across months. In UP as well as Bihar, the figures were comparatively low, but it was 76 percent and 86 percent respectively nevertheless. At first glance, this might seem puzzling given that based on first principles consumption smoothing is a desirable objective since it gives a stable path of consumption. On deeper analysis, the lack of education and the potential of the rule change to make disbursement more complex and hence more prone to corruption and manipulation seem to be playing a role in overruling consumption smoothing. At a more basic level, people prefer simplicity and transparency which a variable allotment mechanism does not possess. Enhanced potential of corruption in PDS and thereby greater leakages seems to be weighing down on preferences and the choice of status quo.

7.9 Summary

In this chapter I analyzed the preference of the rights-holders about different elements of accessing the PDS. The two frontal elements of preference relate to product portfolio of the PDS and delivery mechanisms. In addition, there are preferences over the administrative structures related to selection mechanisms and preference for units for disbursement

(household versus individual). Also, there are significant differences regarding frequency of allotment as well as the uniformity in the size of allotment across months.

The analysis of preferences across various nodes brings out many nuances that may not be in line with common perception. A simple prior for example would have been limited substitution of cereals with pulses. Yet the results show many different considerations bearing on this choice. These choices are mediated through a complex web of historical and coincidental experiences that get reflected in the preferences. Heterogeneity results in prior differences such as type of grain preferred but also through experiences with the PDS, coping mechanisms bring about changes in the preferences over attributes in the PDS.

Similarly, in preferences for delivery mechanisms, a simple choice that would generally be preferred gets complex because of several implementation issues and experiences from other sectors and cases. In all this, the social fragmentation and differentiation based on caste and gender play a pivotal role. What would be a straightforward choice problem reflected in binary preferences turns out to be far more intricate as it is mediated by unequal power relations at each level.

In this context of assessment of preferences, it is important to distinguish between inherent preference over a system versus those conditioned by experiences, peer effects and at times lack of social learning. Is it that success stories of the alternatives are not as publicized as the failures particularly when some systemic changes are in the nascent stages and will mature in due course of time? Notwithstanding the urgent need to fix glitches in quick time since the target population is poor and vulnerable, one point remains salient. While the discourse among policy makers and beneficiaries has focused on getting the fix quickly (as for DCT), it remains that PDS in its current form, on which the preferences are tilted against in many areas, is a product of several rounds of changes, experiments and corrections. To the extent that preferences are dynamic also reflects the changing times where information flow is quick, comparatively cheap and effective. Preference heterogeneity brings out the need for a needs assessment in the PDS vividly.

Chapter 8: Conclusion

In the conclusion chapter, I return to a discussion of the main objective of my thesis: to examine the demand side of a social safety net programme, the PDS, the largest food-based SSNP in the world (Kumar et al. 2012). In the first section, I revisit and highlight some of the analysis of the needs and preferences assessment in the context of the PDS that I have evolved during my research in three Indian states and emphasize the inter-relationships between the incumbent and induced heterogeneity that determines these. I then draw some of the key points from the earlier chapters and examine the implications of heterogeneity on gender, caste, class; governance and the implications for the design of a programme like the PDS. Beyond governance and institutional responses, I also focus on coping strategies as well as comparatively long run adjustments.

In the second section, I identify some of the methodological and data issues encountered in analyzing the demand side of a safety net programme particularly in a highly heterogeneous environment with significant socio-economic and political fragmentation. I also try to highlight areas of research that merit further investigation and analysis. In the third section, I briefly highlight the implications of the research and the findings here for other similar or related context of social policies.

8.1 Conceptual and theoretical reflections

My first objective in this thesis has been to interrogate the contextual factors that lead to heterogeneity and to understand how and why there are differences in the needs and preferences of actual and potential rights-holders from the PDS. The results certainly make a case like Chambers (1995) argument against the inherent reductionism of ‘poverty-line thinking’ and think beyond income-poverty. Further it reiterates the need to internalize the idea of deprivation in which several socio-cultural, political factors play a role, thereby highlighting the importance of needs assessment.

Thus, I examine the concept of heterogeneity, and understand how it mediates the working of an SSNP like PDS. I draw from Sen’s entitlement approach and UNICEF’s framework to analyze processes that lead to heterogeneity. Subsequently I summarize the pathways as

discussed in my chapters 4, 5, 6 and 7 to understand the factors that shape needs and preferences.

8.1.1 Reflections

In chapter 2, I draw from the literature on social protection, i.e. systems which are concerned with protecting and helping those who are poor and vulnerable. Poverty and vulnerability form a basis for understanding the functioning of social protection programmes such as PDS, yet often it not being in sync with the needs and preferences of the stakeholders. I draw from sustainable livelihood approaches (Devereux et al. 2993, 2003). Conceptually I rely on outcome approach to vulnerability as in Chaudhari (2003) that considers not only actual but also expected poverty or food insecurity.

Social protection is commonly understood as ‘all public and private initiatives that provide income or consumption transfers to the poor, protect the vulnerable against livelihood risks and enhance the social status and rights of the marginalized; with the overall objective of reducing the economic and social vulnerability of poor, and marginalized groups’ (Devereux and Sabates-Wheeler 2004, pp.9). As social protection is provided by the state; a system like the PDS becomes an essential part of social protection. It is part of the ‘state-citizen’ contract, in which states and citizens have rights and responsibilities to each other in case of the poor and vulnerable (Harvey et al. 2007).

I follow Devereux and Sabates-Wheeler (2004) and Devereux (2016) in associating the social protection functions in terms of protective, preventive, promotive and transformative roles to varying degrees. In the context of India, I, expand the scope of social protection to include addressing social injustice and exclusion, as explicit in the demands of the Right to Food Campaign. As social protection moves beyond poverty relief and livelihood maintenance and becomes a “policy tool for promoting far-reaching improvements in human well-being” (Babajanian 2012, pp.3), I focus on several delivery mechanisms and product choices within a safety net like the PDS.

I emphasize the role of PDS in reducing poverty and inequality both from the point of view of reducing the incidence of poverty as well as reducing the depth of poverty. Conceptually,

I point out that PDS might not lift many households out of poverty but could play important roles in affecting the depth of poverty. Organizationally, in the functioning of the PDS, I draw from Sen's entitlement approach and pose PDS as an institution for correcting for entitlement failure, in principle noting that entitlement protection is narrower than livelihood protection referring mainly to the social safety net function. I utilize the core element of Sen's entitlement approach that shifts the analytical focus away from food supplies to the inability to acquire food. In the thesis I focus on access as one of the principal drivers of food insecurity.

A second key element relates to social exclusion as pointed by Babajanian and Hagen-Zanker 2012 to look at economic and social disadvantage caused by a diverse set of social, economic, geographical and environmental and cultural factors (Burchardt et al. 2002) and as a manifestation of vulnerability. I emphasize exclusion driven by gender, caste and class based on which poor and/or weaker section's eligible households are excluded from the PDS either by design as well as implementation issues.

Given that social safety nets must aim for broader societal goals of equity, social justice and empowerment, in assessing access to the PDS, I highlight the dynamic processes in exclusion and take a broad view considering erosion of self-respect and denied access to information. The social exclusion framework helps me place PDS in the specific economic, social and institutional milieu of India and the three heterogeneous states. Combined with the theory of access as in Ribot and Peluso (2003), I explore the role of social relationships that constrain or enable benefits from the programmes like the PDS. I draw from a wide body of literature viz. Bastagli et al. (2016); Devereux and Sebastes-Wheeler (2004); Grosh et al. (2008); Tirivayi et al. (2013); and World Bank (2012).

Social safety nets are meant to provide compensation, relief or coping mechanisms to groups considered vulnerable. In relation to PDS as a safety net, I emphasize the need for realizing that there remain alternative tools to achieve them (Holtzman 2009). Specific design choices and methods of implementation would determine whether the PDS achieves its stated goals. This would affect the uptake of the programme.

8.2 Main findings

8.2.1 Issue of delivery mechanisms

As part of the needs and preferences related to PDS, I put significant weight on delivery mechanisms because they are critical in solving the last mile problems and are often the main source of differentiation in access to the PDS. I positioned the issue of delivery mechanisms related to the PDS in the context of the wider global debate on cash versus in-kind transfers. In line with the prior on heterogeneity being the driver of preferences I find the three states where my research focuses show very significant differences in preferences over delivery mechanisms, even more pronounced based on gender, caste and class distinctions (Chapter 7).

The Government of India has barely started implementing the Direct Benefits Transfer (DBT) in social security programmes and in case of the PDS, it is being tried only on a pilot basis. Based on the findings, there is a possibility that other important welfare programmes will also be brought in the ambit of DBT. Towards this, the preference assessment with the investigation of reasons for support and apprehensions regarding DBT provides valuable information from a design perspective. I emphasize that a comparative perspective and a granular approach is required in understanding the optimality of the specific delivery mechanisms including the need for physical infrastructure as well as administrative capital.

I also delineate the importance of political economy where often the arguments in favor of or against a delivery mechanism is driven by ideology rather than facts and sound empirical assessment. As the government plans to move the food subsidy system to replace in-kind transfer (IKT) programmes – including the PDS – the location specific differences can be crucial.

Also, I find a preference for food coupons akin to the food stamp programmes, over both IKT as well as DBT. This is particularly important as in India a true food stamp programme has not been tried. The closest the system has come to has been in Bihar with food coupons but those were redeemable only at PDS shops.

In conclusion, in terms of the preferences, there is no evidence that the rights-holders of PDS always prefer one type of modality. Instead, rights-holders' preferences depended on context. In assessing preferences over delivery mechanisms, several of the fears such as rights-holders selling their food transfers or cash transfers being used for undesirable purposes (alcohol or betting) across the three study states do not seem to hold. The preferences for the form of benefits transfer interact with several household and community characteristics, including programme design, its implementation, households' socio-economic characteristics, and access to markets.

8.2.2 Gender, Caste and class as the axes in access

In terms of access, despite universal entitlements, I find that power relations embedded in local politics, caste and class heterogeneity and political economy considerations, mediate the gendered access to food through state transfers (Chapter 4).

By focusing on the experiences with the PDS in three states and examining the nature of food entitlements accessible to differently positioned people, women, my objective was to capture the nuances of gendered pathways in accessing PDS grains, by exploring both the quality of the entitlement and the nature of treatment meted out to the entitlement-holders.

As much is invested in the ration cards of different forms to access food grains, local power and political economy become very important in determining access through control of these cards. Despite being a universal right, control over ration cards becomes a strong instrument for discriminating against women, the lower castes and the economically less powerful. While overt discrimination is less visible after the passage of the NFSA, quality of product as well as service are instruments that can be more easily used for differentiation because of its intangibility and imperfect observability.

Though I found some evidence from my quantitative data on direct entitlement snatching in terms of the quantity or price of grains, the qualitative data highlighted the locational heterogeneity in gendered access as well as the differentiation based on group identity. While caste is an important marker of social identity in India, some of the expected benefits of homophily do not seem to bear. In fact, with their newfound power, the lower caste dealers

end up being more aggressive in denying rights to their own caste groups. The quality of services is markedly inferior for the groups in focus here, revealing several latent methods through which discrimination is practiced, including lack of information, mixing of inferior grains, longer waiting time and even verbal abuse. These mechanisms impinge negatively on access by compromising their dignity as rights-holders.

Despite equal and universal entitlements, access to food through state transfers will require further shifts in power relations, not just in name but also in practice. It would involve challenging, renegotiating and transforming unequal social relationships, and institutional structures and norms that perpetuate such inequalities. Apart from improving access to information, monitoring and redressal systems/voice need to be strengthened to overcome the near-total control of the local political elite, often the better-off, landowners and upper castes.

8.2.3 Governance of the PDS

The third key issue is related to a focus on governance at the local government and the fair price shop level. This comprised looking specifically at the issue of decentralization and social affirmative action. After that I specifically focused on the protective systems against exclusion post NFSA 2013. Focusing on grievance redressal, I have specifically examined forms of resistance, what has worked and what has not across villages, including issues like corruption and governance. In my analysis of the governance structure related to PDS like inspections, monitoring and/or grievance redressal, I also examined rights-holders' perception around decentralization (PRI role) and social affirmative action (both in local governance as well as dealership in PDS) in the functioning of the PDS.

I examined whether decentralization combined with political representation promotes/improves outcomes particularly for the subaltern groups. I provided evidence to show how gender and caste relationship constrains affirmative action and hence affects the functioning of the PDS. Additionally, I have argued how socio-economic and political factors in conjunction with these institutions also determines the experience of accessing their entitlement. I find, limited movement in the political mobilization of the poor and vulnerable that would lead the empowerment and get closer to meeting the needs and

preferences. In the discussion of political strategies constitutive of the governance of safety net programmes like the PDS, I noted how some political technologies like social affirmative action and decentralization seem to have limited impact because of reasons of historical continuity and deep social divisions negatively affecting recent changes in the PDS. I find political constraints leading to suboptimal outcomes both in the identification of the poor and upon selection the bad quality of services rendered. I analyzed how political strategies often transform but, in most cases, have tried to maintain the status quo. Through my detailed quantitative and qualitative research, I show the ability and choice of manipulations in the system, political decentralization and affirmative action notwithstanding.

While the formal practices such as classification of poor, access to entitlements were often ineffective, informal strategies like substitution of better grains at the state and below state level at times played important protective roles. I review and find from extensive field work that informal practices such as out of turn allocations and better quality of grains for the pliant rights-holders significantly influence (even distort) policy processes. This strongly supports the theses of what Agarwal (2003) calls as 'blurred boundaries' between the state and society in India (Gupta 1995, Harriss and Fuller 2001).

Through research I specifically show how the state interfaces with heterogeneity and choice is a complex problem involving multiple modalities. Different aspects of legislation or policies in relation to the PDS have often been ineffective or had limited effect on governance outcomes. A prime example of this has been the affirmative action programmes.

8.3 Methodological reflections

Methodologically, the strength of my thesis is the comprehensive use of mixed methods involving both quantitative as well as qualitative analysis. Many of the issues that could not be assessed quantitatively were explored qualitatively and provided important insights. How affirmative action was often ineffectual and at times counterproductive was for example succinctly captured in qualitative analysis. Similarly levers of discrimination and entitlement snatching were also understood by combining quantitative and qualitative methods.

Regarding needs assessment as well I used a combination of subjective approach in social indicators research as well as the objective approach. I tried to capture hard facts about the functioning of the PDS such as grains accrued as well as perception-based evaluation of the PDS as well as subjective realization of the needs. Through the needs assessment, the objective was to suggest design changes in a way that provides information required to bring about change beneficial to the target population. From the analysis I assessed that there were several fronts on which PDS performance in terms of meeting the community's needs and preferences (including their interests, opportunities and constraints) seems to be subpar.

The analyses in different Chapters supports the prior that I started with i.e. for various reasons including historical continuity, safety net programmes are often designed without accounting for changing needs and preferences. In a dynamic economy like India there is much more concern with growing income, urbanization leading to changing food preferences, improving access to information, and changing aspirations of the people. Based on the gap between demand and supply side of the PDS, I consider it as a contributor for the leakages and corruption. The results from the analysis highlight the importance of the broader concept of access as in Ribot and Peluso (2003).

Yet there were some methodological issues that emerged during this research. A methodological problem I already mentioned was the danger of confounding factors. Though I provide elaborate justification for what is included in the analysis, it cannot account for errors of omission – i.e., contexts that may be important to the governance, performance and utilization of the PDS, but have not been included or may not be included (due to unobservability in the data).

Another methodological concern, inherent in the study can be called a black box character. With all the attempt, the level of theoretical support for the analysis here cannot be comprehensive. Indeed, much has been done in this research placing primary emphasis on people's perspectives on systems such as the PDS. In the context of the PDS itself there are several layers of functioning of the system and it is very difficult to unpack all the roles of different nodes from the actual end of consumption to the governance node involving local, state and central governments. Therefore, this study has tried to identify and understand the roles of a range of actors (women, government officials, local government and higher order government), primarily at the local level.

Finally, there is a methodological question regarding the validation of this research. I have tried to involve different methods such as triangulation and have tried multiple datasets, invoking cross-validation, yet some gaps would remain. Also, the cross-sectional nature of the data allows limited validation. In my research triangulation has been achieved through multiple data sources (interviews, focus group discussions, participant and non-participant observation and tracking official policy documents).

8.3.1 Limitations in my study

As discussed in my thesis, I examine a spectrum of demand side attributes and emphasize the complexities brought in because of social differentiation and local power relationships in not only the functioning of the system but also in terms of what is desired out of it. I bring forth the ideas like the issues of coping strategies, affirmative action, power relations, and local political economy in the context of food-based safety net programs. However, there remain limitations in my work that I discuss in this section.

- (a) Firstly, I was constrained by the cross-sectional data given the time and resources. Dealing with cross-sectional data I was unable to conduct causal analysis. Hence in my thesis my data examines a short-term view of the rights holders' perspective. How these effects are distributed over time could have been possible with a panel data and help answer the question: whether the needs assessment of PDS in my work is just a contemporaneous view or is for the longer term. Over time, it would have been interesting to note if there had been updating of beliefs with regards to the rights holder's needs. Further, again given the time and limited resources, I could not experimentally test several propositions that have emerged and several solutions that I have suggested. For policy recommendations as opposed to my observational data, experimental evidence could have been desirable.
- (b) Secondly, caste is an important factor in access to public programmes as well. In PDS it is possible that caste per se could put some households at a disadvantage. The adversity of caste based discrimination could be mitigated to some extent for

the rights holder if the household in question shares the caste with dealer and/or local political elite. That is the prior with which affirmative action has been operationalized. To what extent this channel works is an empirical question that I address in my thesis. Empirically in my quantitative analysis results on shared caste with dealer do not seem to have straightforward effects, even some of the expected benefits of homophily do not exist. However, during my qualitative data collection, the field observations showed that caste mattered at a more granular level. In fact, it mattered more at the sub-caste level of “gotra” (clan) than at the broad categorization of social group. The dealer defined at the caste group level did not capture the full reality. My thesis could have gone a notch higher if I had defined homophily at a more granular level.

(c) Third, in my work while I have emphasized on the caste of the dealer with the prior of assessing the role of affirmative action in relation to PDS, I missed collecting data on the characteristic of the dealer in terms of his social status as well as his or her social and official networks. Collecting relevant network data of the dealers, their relationship with the *mukhiya* (the village head), government officials at various levels and other formal and informal networks that the dealer relies on would provide a fuller picture of how local power relations affect the functioning of the PDS.

8.4 Policy recommendations

The crux of the thesis is that there is clear motivation for rigorous needs assessment in programmes like the PDS. Prior to that from a policy perspective, I explore all different manifestations of the compromises in the entitlement of rights holders. Policies have to take into account the landscape of ways and means in which the rights holders do not get what they should, based on acts and laws. Policies need to internalize the multitude of factors that interact in complex ways. Affirmative action without complementary changes in governance of PDS does not bring about significant changes, an issue that needs to be internalized. Similarly, in terms of coping strategies, the portfolio of options is quite informative and how could these be facilitated. Though it is not a stated goal of policy to engender collective

action but creating conditions for rights holders to engage collectively would help meeting the stated goals of the PDS.

The levers for needs assessment are many and understanding them through research is likely to lead to greater cost effectiveness of the programmes such as the PDS. Just as needs in relation to the PDS have changed significantly over time or are changing, the contours of needs assessment are also changing quite rapidly. In the changing dynamics the expansion of needs assessment is needed to take place at two levels: a deeper analysis of existing as well as of new systems and its traits. Also, informational requirements and streamlining of administrative tiers comes out clearly in the needs and preference assessment.

Hence, based on the findings, I argue that needs assessments should be a fundamental component of a programme like the PDS. A thorough needs assessment can improve the utility of the PDS manifold as the gaps are identified on different fronts. It can help implementers determine an effective response to the problems affecting the system. However, I do acknowledge that there is limits to needs assessments but then there are aggregate policies over which need assessment can help design issues. This can be thought at two levels. First what are the contexts in which heterogeneity leads to different needs and preferences, for example, product portfolio, delivery mechanisms and selection mechanisms. Second in each of those contexts, what is being desired in relation to the existing system.

The governance structure of the PDS system is found to have a direct bearing on the experience of accessing food entitlement. The most common form of corruption in PDS is the diversion of food away from the intended rights-holders; schemes are on to plug that leakage. The systems that are being rooted needs rigorous preference assessment as several of the proposed reforms/solutions are untried.

In my thesis I lay out the framework and conduct analyses that highlight heterogeneity as a basis for needs/preferences assessment. I capture this both in terms of standard outcomes for example the level of food consumption and the prices paid. Apart from these outcomes, several process indicators are important for the needs/preferences assessment in the PDS. In reality because of heterogeneity, different mechanisms like food, cash and coupons for example are important from a policy perspective. I capture the preferences not only over ideas but also over implementation.

In the Indian context, social identity and other contextual factors bear significantly on the needs and preferences from a system like the PDS. Caste, gender and power relations provide a strong backdrop in which the PDS is being accessed and results in significant variation in experiences and utilization which feeds into disparate needs and varied preferences. The heterogeneity and complexity of social relations cannot be forgotten.

Two processes central to the safety net programme like the PDS relate to the identification of poor people and the allocation of food as part of anti-poverty policy. I covered significant literature related to the academic and policy discourse on the topic and how the thinking evolved towards state subsidized transfers in the form of PDS, cash transfer or food coupons. I noted the ambivalence in policy representations about whether poor would be better off with systems as of now or there were needs felt for change. The issues in the PDS reflect the consensus and the failures to address the persistent 'problem' in an old system with significant time span of operation. I also brought forth the policy representations of what constitutes a 'solution' to the problem.

Several policy changes in the PDS over time such as the focus on the poorest families through the '*Antyodaya*' approach, seemed justified since more BPL families could 'cross the poverty line' with income growth but still number of poor and vulnerable remained sizable in India. Inter alia my research showed the subjectivity of the poorest people as deficient compounded with identities such as gender, caste and class. I cited several studies showing the limitation of policy interventions in that they rarely (if ever) address the deeply ingrained inequalities invariably inherent in complex social relations in India.

The central problem in access of the SSNP like the PDS that I highlighted is a result of personal deficits in poor people such as lack of capital (human, social or financial) or other capacity. Looked at from that perspective, I pointed out that such a representation of the issue of access makes access to SSNP for the poor as more a structural problem. Changes in an SSNP like the PDS needed to be sensitive of this structural problem.

The policy objective constructed based on the problems highlighted in relation to the state of the PDS would require a package of economic, social and political changes. The training and infrastructure support to the poor would be required to bridge the deficits experienced

by the poor and vulnerable to make them experience strong and sustained levels of food security. My findings pointed out two significant shifts in policy space i.e. decentralization and affirmative action had only context specific effectiveness as such actions interfaced with pre-existing distinctions. I also scrutinized the gap between normative and actual policy.

Understanding the issues related to the PDS for which a needs and preference assessment is desirable requires understanding the continuum of formal to informal practices and the political economy. Only of late some, limited formal practices have been put in place but a vast number of informal strategies have been employed over time. Through the needs assessment, I provided evidence of how formal and informal practices have determined the outcomes that have been reflected in the needs and preferences. The underperformance of formal systems like grievance redressal mechanisms comes out generically from the diverse location sites in this study. The institutional solutions' success or drawbacks have been laid out in the needs and preferences assessment and will be helpful in policy choices and implementation.

Despite some achievements, my thesis draws attention to intersectionality in determination of outcomes where for example the masculine culture interfaces with caste disparities. I also pay significant attention to the idea of class. As traditional differentiators are still prevalent, class based on economic and asset power has become an important distinction. It is not merely that primary actors have traditionally belonged to higher caste and have been male, class with new powerful castes and new-found economic power must be taken into account. Whatever solutions are considered they would be bound by socially constructed norms and formal practices would be undone with informal systems.

8.5 Way forward

Having examined the intended, and unintended or informal consequences of policies and institutions, what this thesis proposes in terms of future research is evaluations of the actual or potential interventions that could improve the outcomes and meet the needs and preferences of the rights-holders to the best extent possible. Whether in the forms of a natural experiment where applicable or through controlled experiments where feasible, the research based on such evaluations though resource intensive would help design changes in the

programme to make it most effective. An ancillary question underlying this research is why the objectives are not optimally achieved.

I propose that such performances of social protection programmes like PDS are not accidental and often a result of poor design a part of which is attributable to lack of sensitivity about the demand side of the social safety net programmes. Lack of adequate customization as per community needs may account for persistent policy failures. Customizing the system for the first best outcomes, in a large and complex space like India may be a tall order but is worth exploring. The implications clearly are, the need to work on realizing the constraints based on socio-economic-political realities and exploring informal solutions where possible.

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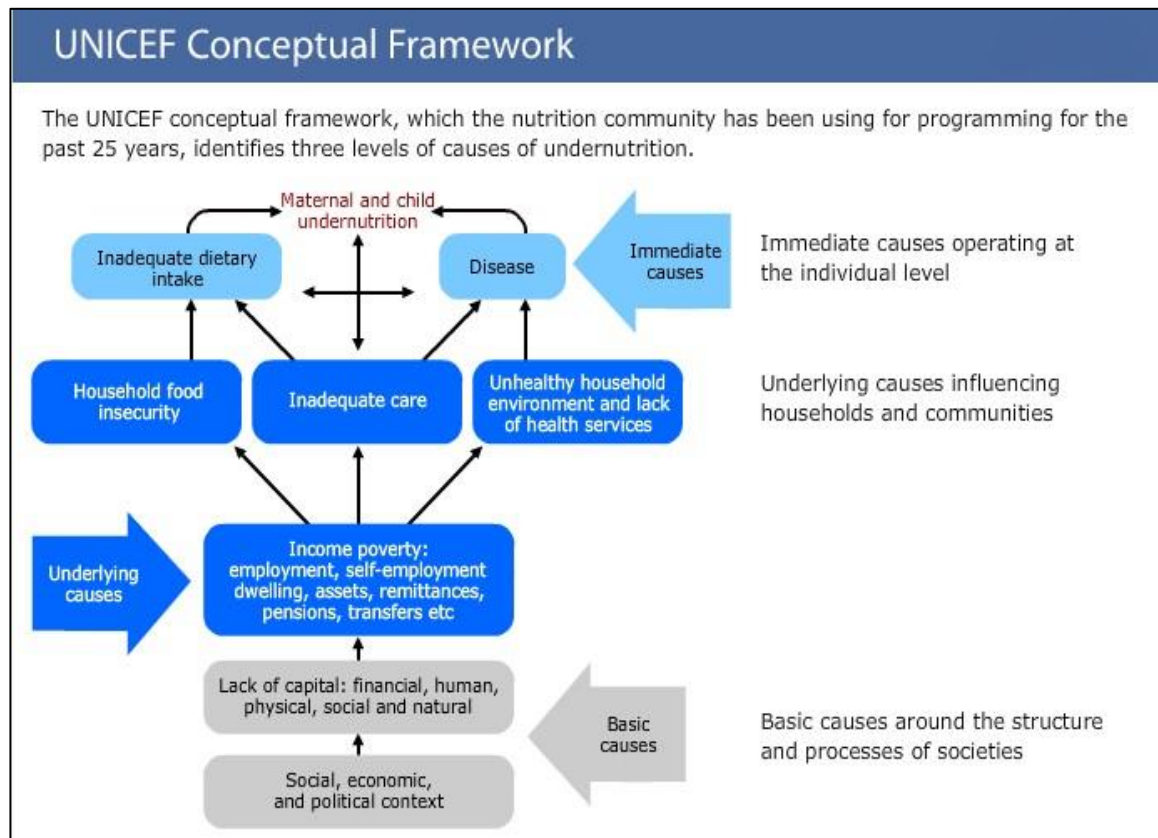
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Annex 1: UNICEF Framework



UNICEF framework for determinants of malnutrition⁶⁶

⁶⁶The UNICEF conceptual framework, identifies three levels of causes of undernutrition. They are: 1) Immediate causes operating at the individual level 2) Underlying causes influencing households and communities 3) Basic causes around the structure and processes of societies

- 1) The immediate cause of undernutrition is a result of a lack of dietary intake, or disease. This can be due to consuming too few nutrients or an infection which can increase requirements and prevent the body from absorbing those consumed. In practice, undernutrition and infection often occur at the same time because one can lead to another. This can increase the likelihood of an infection or increase its duration and/or severity. Infection can result in loss of appetite, increased nutrient requirements and/or decreased absorption of nutrients consumed. This triggers further weight loss and reduced resistance to further infection. This vicious cycle needs to be broken by treatment of infection and improved dietary intake.
- 2) Whether or not an individual gets enough food to eat or whether s/he is at risk of infection is mainly the result of factors operating at the household and community level. These are often referred to as 'food', 'care' and 'health' factors.. For an active and healthy life, people need enough food as well as the right balance of fat, protein, carbohydrates and micronutrients. Food security encompasses both quantity and quality of food accessed.
- 3) The third level comprises basic causes related to availability of resources (human, structural, financial) and how they are used (the political, legal and cultural factors).

Annex 2: Relevant Social Protection Programmes in India

Causes	Relevant Social Protection Programmes
<p>Immediate</p> <p>Inadequate dietary intake</p> <p>Disease</p>	<p><i>Annapurna Yojana, Antyodaya Anna Scheme, Mid-Day Meal Scheme, Rashtriya Swasthya Bhima Yojana</i></p>
<p>Underlying</p> <p>Household food insecurity, Inadequate care</p> <p>Unhealthy household environment and lack of health services</p> <p>Income poverty</p>	<p>Targeted PDS ICDS, Reproductive and Child Health</p> <p>National Rural Health Mission, Immunization projects, <i>Janani Suraksha Yojana</i></p> <p>MGNREGA, National Social Assistance Programme, Minimum Support Price</p>
<p>Basic</p> <p>Lack of capital</p> <p>Socio-economic-political context</p>	<p>Subsidy schemes for the procurement of inputs such as fertilisers, fuel, tractors and irrigation facilities, support for community grain banks, horticulture projects etc.</p> <p>Food price regulation through pricing policies, legislations with respect to labour rights, land reform, tenancy registration, minimum wage, affirmative action and right to information.</p>

Annex 3: Status of Districts in Terms of Food Security Outcome Index (FSOI)

Table 5a: Status of Districts in Terms of Food Security Outcome Index (FSOI)

Secure	Moderately Secure	Moderately Insecure	Severely Insecure	Extremely Insecure
Jharsuguda	Nayagarh	Dhenkanal	Balangir	Nuapada
	Cuttack	Mayurbhanj	Nabarangpur	Rayagada
	Jagatsinghapur	Puri	Jajpur	Gajapati
	Balasore	Kendrapara	Sambalpur	Malkangiri
		Khordha	Sonepur	Kandhamal
		Deogarh	Sundargarh	
		Angul	Keonjhar	
			Bhadrak	
			Bargarh	
			Baudh	
			Kalahandi	
			Ganjam	
			Koraput	

Source: Odisha Food Atlas-2008

Annex 4: Quantitative Survey Questionnaire

- A0 Household ID
- A1 Interviewer name
- A2 Date of interview
- A3 Time the interview started
- A4 Time the interview ended
- A5 PDA number
- A6 District
- A7 Block
- A8 Village name
- A9-1 Respondent name
- A9-2 Respondent relationship to head of the household
- A10 Household head religion
- A11 Household head social group
- A11.1 Age of the respondent
- A11.2 Education level of the respondent
- A12 How many people currently live in this household?
- A13 How many people have lived in this household for the past 6 months?
- A14 How many years have you lived in this village?
- A15 Does anyone from the family migrate/stay away from home for whole or part of the year?
- A16 If yes please specify how many people?
- A17 Whether BPL household or not?

- A18 Whether enrolled as AAY household?
- A19-1 Are you a ration card holder?
- A19-2 For how many years have you been holding your ration card (information about first ration card, if you have more than one?)
- A19-3 Do you have PDS (ration) card? If yes, which one?
- A19-4 Total number of the members registered in the ration card (information about first ration card, if you have more than one)
- A19-5 Your ration card is eligible for? (Information about first ration card, if you have more than one)
- A20 Is FPS located in your village?
- A21 If yes please specify how many?
- A22 Primary sources of Income
- A23 Secondary sources of Income
- A24 Are you *Aadhar* card holder?
- A25 Do you have a bank account?
- A26 Literacy of the household member
- C0 How many months did you get the paddy from PDS in last year?
- C1 In which months you did not get paddy from PDS?
- C2 Quantity
- C3 Unit (Quantity)
- C4 Price per kg
- C5 From where did you get your ration card?
- C6 How much money did you have to pay to get ration card?
- C7 Did you have to bribe/commission to get your ration card?
- C8 If yes in which year?
- C9 To whom did you pay the bribe/commission?
- C10 Did you use political connection to get your ration card?
- C11 If used political connection please specify the year?
- C12 Did village *panchayat* or its office bearer help you get ration card?
- C13 Do you know what commodities are to be sold and what quantities by a FPS owner to you every month?
- C13-1 Do you know price of the commodities to be sold by a FPS owner to you every month?
- C14 Do you keep your ration cards with you or with the shop owner?
- C15 For how many years have you been drawing grains from PDS?
- C16 What do you do with PDS grains?
- C17-1 Quantity for each option they choose in the previous question
- C18 If you sell, what rate do you get?
- C19 Is the rate high or low?
- C20 Do you also take kerosene oil?
- C21 If yes, what do you do?
- C22 If you sell, what is the rate per litre?
- C23 What is your purchase price per litre?
- C24 What is the existing market price per litre?
- D1 Do you feel that you get ration at quantities and prices fixed by the government?
- D2 Does your shopkeeper give you ration on time? Does your shopkeeper deliberately try to delay your transaction?
- D3 In terms of your experience in shopping at PDS please rank on a scale of 1 to 5 with 1 being the highest and 5 being the lowest
- D4 How do you rank the timeliness of availability of ration?

- D5 Does the ration shop owner use accurate means of weighing the commodity?
- D6 Does the ration shop owner have electronic balance for weighing?
- D7 Do you have any grievances? Have you ever tried to express your grievances relating to PDS?
- D8 If yes, where have you tried to express your grievances if any regarding PDS (choose multiple answers if applicable)
- D9 Do you want to substitute equivalent rice with some other commodity? Do you want to substitute equivalent wheat with other commodity?
- D10 If yes, how will you rank?
- D11 Do you like PDS to supply pulses with an option to substitute for equivalent rice or wheat?
- D12 Do you like PDS allocation to be based on per individual or per household?
- D13 With aggregate allocation same, do you like PDS allocation to equal each month or differ across months?
- D14 Do you like cash transfer equal to market value of grains instead of allocation through PDS?
- D15 Do you think that following problems could come up in cash transfer for food? Give rank ordering- Choose multiple if applicable but rank them –
- (a) Money unlikely to come in time
 - (b) Bank would create problems in disbursing including their cut
 - (c) Purchasing power will not be preserved as price change will not be properly accounted for
 - (d) Cash transfer can be misused
 - (e) Getting money is unsafe
 - (f) Dealing with banks is complex with too many formalities
 - (g) Cash transfer system is unknown to me so lot of uncertainty
 - (h) Others, specify
- D16 Do you think cash transfer for food is the right way to go?
- D17 For the following reasons give the rank ordering
- (a) Its easier
 - (b) Money can be used the way we want to
 - (c) I can buy better quality food since PDS quality is not good
 - (d) If the money gets transferred automatically then i do not have to deal with officials
 - (e) Money transferred in banks helps in planning what to spend what to save
 - (f) I can have better proof if entitlements are not provided
 - (g) Others, specify
- D18 For a living women elder in the family should cash transfer be directed towards her?
- D19 Have you personally experienced or observed caste-based discrimination in PDS?
- D20 Have you experienced or observed gender discrimination in PDS?
- D21 Is the FPS manager in your village same caste as you?
- D22 Is the FPS manager same social (caste) group as you?
- D23 How important it is that FPS manager is from your caste?
- D24 How important it is that FPS manager be a woman?
- D25 Do you think leakages will be lower if women were FPS managers?
- D26 Enumerator please explain inclusion and exclusion criteria- Do you prefer exclusion criteria over inclusion criteria for PDS?
- D27 Has the performance of PDS (in meeting your needs) improved?
- D28 If yes, when (in which year) improvement started?

- D28-1 If yes, when (in which year) most improvement?
- D29 Please choose from the following reasons for improved performance if chosen yes
- (a) Political accountability
 - (b) People are more aware
 - (c) Local government just turned out to be better
 - (d) State government has started looking closely
 - (e) People do not need PDS that much, so it shows less problems
 - (f) Good monsoons were there so smaller needs
 - (g) Others, specify
- D30 Do you consume any coarse cereals?
- D31 If yes, which of those?
- D31.1 What else in cores cereals would you like to consume?
- D31.2 Under NFSA there is choice to expand the food basket. In addition to rice wheat which of the following would you add?
- D31.3 Do you know the nutritional benefit of the coarse cereals?
- D31.4 If yes, what are they?
- D32 Give the rank ordering of the three options for food, food coupons, PDS, cash transfer.
- D33 Did you face any issues in accessing PDS or getting your entitlement?
- D34 If yes did you approach the *panchayat*?
- D35 Did they address your problem?
- D36 In what way did *panchayat* help? Choose multiple if applicable
- D37 Do you agree that after 2011, the *panchayat* has become more accountable?
- E1 Unit for land
- E2 What is your total landholding? (Size)
- E3-1 Leased in land (Size)
- E3-2 Leased out land (Size)
- E4 What is your average annual production of paddy? (Quantity) (In the last three Years)
- E5 Unit for quantity
- E6 What is your annual production on average of wheat? (Quantity) (In the last three years)
- E7 Unit for quantity
- E8 What is your annual production on average of pulses? (Quantity)
- E9 Unit for quantity
- E10 Monthly food expenditure on average (In rupees)
- E11 Monthly non-food expenditure on average (In rupees)
- E12 Livestock owned
- E13 Number of livestock owned of each. 1. Cow, 2. Buffalo, 3. Poultry 4. Goat 5. Ox, others, specify
- F1 Are you aware of Minimum Support Price?
- F2 Do you have provision for sale of your produce at government prices in your village?
- F3 If yes, what crops are covered (you can give multiple options)
- F3 If yes, who is operating/procuring your produce?
- F4 Do you avail minimum support price for your produce?
- F5 Purchase prices of your produce by the government/cooperatives/panchayat officials are"
- F6 Does the agency use fair means of weighing the commodity?
- F7 Does the agency use electronic balance for weighing?

- F8 Have you ever tried to express your grievances relating to procurement?
- F9 If yes, where have you tried to express your grievances (choose multiple answers if applicable)
- F10 Do you wait for announcement of MSP for crop planning?
- F11 Do minimum support prices act as an incentive to grow crops?
- F12 Where do you sell your produce?
- F13 At what distance from the farm the produce is sold?
- F14 What is the mode of transportation?
- F15 Rent per unit of mode of transportation used
- F16 Which option of selling is easier?
- F17 Which option of selling is more profitable?
- F18 Who makes faster payments for the produce?
- F19 After how many days of production do you get the prices of your produce on selling it to government officials?
- F20 What are the constraints faced by you in MSP?
- F21 What are your suggestions to improve MSP?
- G1 How you perceive the role of Panchayat in functioning of PDS?
- G2 Are *Mukhiya* and dealer of the same caste?
- G3 Has regular election of *panchayat* improved functioning of PDS?
- G4 If yes, are they from same *tola/ward*?
- G5 In your opinion does the same caste of *Mukhiya* and dealer affect functioning of PDS?
- G6 If yes, whether it (1) improves or (2) worsens?
- G7 Have you had experienced conflict with dealer?
- G8 If yes, whether you have approached the *Mukhiya* or other *panchayat* functionaries?
- G9 Did *Mukhiya/Panchayat* functionaries help you?
- G10 Does *Mukhiya* inspect the distribution of PDS commodities?
- G11 If yes, how frequently?
- G12 Do government functionaries inspect PDS functioning?
- G13 If yes how often?
- G14 If yes, whether he/she comes with *Mukhiya/panchayat* representative?

Annex 5: Determinants of wheat quantities obtained from PDS: Chapter 4

Table 10: Determinants of wheat quantities obtained from PDS: Parsimonious Model

VARIABLES	Only FHH	Only Caste	Only Class	FHH & Caste	FHH & Class	Caste & Class	FHH, Caste & Class
Dependent variable- wheat quantity obtained from PDS							
FHH (1=yes, 0=No)	0.99*** (0.26)			0.92*** (0.26)	0.79*** (0.267)		0.72*** (0.269)
SC (Yes=1, No=0)		-0.681** (0.325)		-0.551* (0.326)		-0.749** (0.325)	-0.635* (0.326)
ST (Yes=1, No=0)		-2.053*** (0.391)		-1.998*** (0.389)		-1.933*** (0.388)	-1.898*** (0.387)
Minority (Yes=1, No=0)		0.037 (0.893)		-0.252 (0.893)		-0.201 (0.885)	-0.408 (0.886)
General (Yes=1, No=0)		-0.552 (0.437)		-0.549 (0.435)		-0.399 (0.435)	-0.414 (0.434)
Actual Land holding size (in Acre)			0.022 (0.033)		0.024 (0.033)	0.008 (0.033)	0.011 (0.033)
Monthly non-food expenditure on average (in rupees)			-0.002*** (0.000)		-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)
Constant	10.492*** (0.155)	11.281*** (0.169)	11.964*** (0.267)	10.940*** (0.194)	11.579*** (0.295)	12.381*** (0.289)	12.003*** (0.320)
Village Fixed Effect	No	No	No	No	No	No	No
Observations	1,077	1,077	1,077	1,077	1,077	1,077	1,077
R-squared	0.013	0.026	0.025	0.037	0.033	0.048	0.055

Table 10a: Quantity of wheat obtained from the PDS

	No village effect	With village Effect
Female headed household	0.252 (0.35)	0.262 (0.34)
Schedule caste	-0.56 (0.37)	0.009 (0.43)
Schedule tribe	0.151 (0.50)	0.884* (0.52)
General caste (Yes=1, No=0)	-0.08 (0.33)	0.108 (0.45)
<i>Number of months in a year that got PDS rice</i>	-0.19 (0.19)	0.006 (0.216)
<i>Number of months in a year that got PDS Wheat</i>	0.48*** (0.16)	0.24 (0.22)
AAY card holder (Yes=1, No=0)	1.64*** (0.59)	1.676** (0.714)
NFS card holder (Yes=1, No=0)	-0.64* (0.35)	-1.59* (0.829)
Do you feel that you get ration at quantities and prices fixed by the government	-0.48* (0.26)	-0.029 (0.306)
Do government functionaries inspect PDS functioning?	-0.18 (0.28)	-0.663** (0.308)
Wheat Own Production quantity (in Kg)	-0.02** (0.01)	-0.021 (0.016)
Wheat Market quantity	-0.01 (0.01)	0 (0.014)
Have you ever tried to express your grievances relating to PDS?	0.69** (0.27)	0.466* (0.263)
Household size	0.91*** (0.10)	0.89*** (0.124)
Other controls –Age, caste x FHH interactions, knowledge about prices & quantities, homophily own and mukhia, FPS location, use electronic weighing, land size		
Village Fixed Effect	No	Yes
Constant	3.44*** (1.12)	2.329 (1.635)
Number of Observations	645	645

Annex 6: Brief description of VDSA data

The longitudinal Village Level Studies of ICRISAT collects data on social and economic changes in the village and household economies in the semi-arid tropics of Asia and Africa. In India, VDSA has traditionally collected data in southern India and since 2010, in eastern India (including Bihar). Data from 2010 until 2012 were available for Bihar based on surveys in four villages in two districts of the state viz. Darbhanga and Patna. VDSA is a longitudinal survey collected every month over a period of three years for 160 households (40 in each of the four villages). The VDSA sample is not representative of the districts or the states from where it is drawn, but it provides detailed data on household consumption patterns (quantity purchased; sources of purchase, including PDS, open markets and home production; and prices paid). Consumption from the same households, VDSA allows to investigate how households respond to the subsidy.

The surveys provide data regarding the purchases from PDS for both the principal cereals in Bihar viz. rice and wheat. This can help create indicators of access to PDS as well as the total value of purchase. The prices paid by the rights-holders and the total expenses are also provided. Further, VDSA dataset provides detailed information on household characteristics (such as land and other assets ownership and occupational characteristics) as well as characteristics of the location are available in the VDSA data. In addition, the survey provides information on characteristics such as education and gender of household head, social identity at a disaggregated level (for example sub caste). Most importantly, VDSA data provides information on subjective valuation of PDS (rank between 1-10, with 1 being the highest and 10 lowest).