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A Workfare Programme and its Consequences: A Case Study of the Indian NREGA

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'Kaun sahi daam deta hai?' (Who will ever pay the full wage?)
A woman talking about the NREGA.

(Adhikari and Bhatia, 2010).

Contents

Introduction

On Friday, 27th February 2015, Prime Minister Narendra Modi blatantly denounced the National Rural Employment Generation Act (NREGA) in a speech given during a session of the Parliament: ‘People can doubt my understanding on some subjects but no one can doubt my political sense. My understanding tells me never to remove MGNREGA because it is a monument of failure of the Congress party; it has to pay people to dig ditches. With song and dance and drum beat, I will continue with the scheme’ (Varma and Khanna, 2015). The attack, addressed to Congress politicians, illustrates the tensions existing around the NREGA. Indeed, according to some, the ‘largest and most ambitious social security and public works programme in the world’ — as described by the government of India itself — generates nothing but unproductive works. Detractors claim that NREGA workers are ‘playing with mud’ (The Hindustan Times, 2008). Even among researchers, the programme does not meet general approval: ‘The MGNREGA may be described as both a major success and a huge failure’ (Shah, 2016). In a country expected to be the next world’s superpower, facing rising urban-rural disparities and widespread poverty, such an ambitious policy could be a turning point. ‘What does the NREGA *really* accomplish?’ is the question this dissertation tries to give an answer to.

In September 2005, the National Rural Employment Guarantee Act was legislated with the mission ‘to provide at least 100 days of guaranteed wage employment in a financial year to every rural household whose adult members volunteer to do unskilled manual work’ (NREGA Guidelines). Later renamed Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), the first measures were launched in February 2006 in 200 districts (‘phase 1’). The formula used to choose these districts remains unknown (Sukhtankar, 2016), though evidence shows the government applied two principles: 1) the poorest districts must be included; 2) every regional state must have at least one district selected (Shah and Steinberg, 2015). The second phase was rolled-out in April 2007 in 130 districts and the third phase in April

2008 in the remaining 270 districts. As for the first phase, poverty remained the main criterion in the progressive roll-out. The programme now operates in 701 districts and receives about $10 billion every year by the Central State. A distinction must me made between two instruments of the policy. 'NREGA' designates the legislative Act specified by the Central government. 'NREGS' (National Rural Employment Generation Scheme) refers to the means adopted by state governments to implement the NREGA within their territory. Regional states are entitled to modify schemes, but not the Act. The Central State delegates powers to regional states, which can delegate powers to subordinates only if it is in accordance with the central state's directives. To make the reading easier, the term 'NREGA' will be used to designate both the Act and the Scheme, unless specifically mentioned.

The implementation of the NREGA is taking place in a context of persistent poverty in rural areas. Besides, the urbanisation process that draws thousands of citizens in cities makes the situation even worse. The objective is thus to slow down the flow of people heading to metropolises to preserve a productive, dynamic and numerous workforce in villages. The NREGA was inspired by Gandhian philosophy. Hence, the fact that the programme is based on concepts such as decentralisation or self-governance, used by militants during the fight against the British *Raj*, is not surprising. It is noteworthy to mention the long history of social safety nets in India. Many workfare programmes aiming to reduce rural poverty were introduced between 1970 and 1990. The Maharashtra Rural Employment Programme initiated in 1972, giving a guaranteed job and wage to applicants, was a source of inspiration for the NREGA (Bhattarai et al., 2018).

The policy targets all rural households in India on a voluntary basis, i.e., more than 600 million individuals — roughly 10% of the world's population. The main goal is to alleviate rural poverty by protecting agricultural labourers against seasonal fluctuations in employment and wage exploitation. The government set four guiding objectives: '1)Providing not less than one hundred days of unskilled manual work as a guaranteed employment in a financial year to every household in rural areas as per demand, resulting in creation of productive assets of prescribed quality and durability; 2) Strengthening the livelihood resource base of the poor; 3) Proactively ensuring social inclusion and; 4) Strengthening Panchayati Raj Institutions' (NREGA Guidelines). This list is completed by numerous additional goals, such as 'to create a durable and productive rural asset base', ' the empowerment of the socially disadvantaged, especially, women, Scheduled Castes (SCs) and Scheduled Tribes (STs), through the processes of a rights-based legislation'.

The NREGA is an innovative social programme. As Jenkins and Manor (2017) underlined, this 'bottom-up, people-centred, demand-driven, self-selecting and rights-based programme' was enacted by the Parliament so it is justiciable. This law-based approach is expected to allow an efficient provision of jobs and the construction of public facilities. Governmental guidelines explain how the NREGA is supposed to be carried out. The first step to accomplish for a household is to obtain a Job Card (JC), which is a legal document that proves the household's registration, its right to work under NGREGA conditions and gives protection against fraud. The JC is valid for 5 years. The household has to fill a form and submit it to the *Gram Panchayat* (GP). It can be done throughout the year in order not to penalise migrant families. 'Household' is defined as the members of a family who share blood, marriage or adoption ties and normally reside together and share meals or hold a ration card. Every individual over 18 can apply. To live in the related GP is mandatory (verified by an annual door-to-door survey). No minimal work duration nor limit is imposed. The only requirement is that applications for jobs must be for at least 14 continuous days (6 in case of sanitation facilities). Volunteers enjoy a large range of rights: confirmation receipts, a job provided 15 days after their application at the latest, amenities on the worksite (drinking water), a wage premium in case of a far worksite (more than 5km from the house), information on their job cards and data registered in their files (notably muster-roll register), weekly payments, compensations in case of delays (equivalent to 0.05% of the salary), a medical insurance.

All that is managed by a complex and strictly hierarchised administrative infrastructure. The principal actor is the *Gram Panchayat,* the institution operating at the village level, in charge of monitoring applications, supervising worksites, issuing Job Cards and providing jobs. Guidelines, budgets and the types of jobs are fixed at the Central State level by the Central Employment Guarantee Council. State Governments set up State Employment Guarantee Councils to design and implement regional schemes, ensure transparency and the effective implementation. Many intermediate administrative units operate between the Regional State and the *Gram Panchayat*. The distribution of funds follows a tranches approach. They are versed progressively to enhance transparency and accountability. The Central government allocates a budget to each State government, which distributes a sum of money to GPs. A tranche is versed once a state government proves to have reached a certain amount of expenditures by showing workers' data. The law requires that the labor budget must exceed 60% of total spending. The federal government finances 100% of the payment of salaries and 75% of the materials needed for the construction of projects.

KEY STAKEHOLDERS- ROLES AND RESPONSIBILITIES

13. Who are the key stakeholders of MGNREGS?

A. The key stakeholders are:

1. Wage seekers
2. Gram Sabha (GS)
3. Three-tier Panchayati Raj Institutions (PRIs)
4. Programme Officer at the Block level
5. District Programme Coordinator (DPC)
6. State Government
7. Ministry of Rural Development (MoRD)
8. Civil Society
9. Other stakeholders [viz. line departments, convergence departments, Self-Help Groups (SHGs), etc.]

The list of the main stakeholders

Source: NREGA Operational Guidelines (Ministry of Rural Development)

Other governmental and non-governmental actors play a role as inspectors of democratic practices in the implementation of the policy. Civil Social Organisations and Self-Help Groups assume a function of observing partners by helping GPs and State governments monitor and design guidelines. Recently, India launched a new wave of programmes in the fields of sanitation, hygiene and nutrition in rural areas. A 'convergence planning' (Shah and Steinberg, 2015) thus links the NREGA and other schemes to foster the creation of sustainable assets and achieve poverty reduction goals.

The NREGA has been conceived as a tool to reverse the downward trend initiated by failing agricultural policies. Dorin and Aubron (2016) showed that the birth of the NREGA coincided with a period marked by a decrease in agricultural incomes and interrogations on the 'growth sans employment' (Raveendran and Kannan, 2009). The countryside is left aside of the benefits brought by a steady growth. In 2004, the creation of a National Commission to accelerate growth in rural areas and the advocacy of Jean Dreze made the creation of a new antipoverty policy necessary.

Why a labour programme? In current debates, public works programmes are emerging as the best way to transfer money to the poor in developing countries. In 2018, the World Bank recorded 94 labor-based programmes active in 142 countries (The World Bank, 2018). For policymakers, their attractiveness is based on their self-targeting approach: the unpleasantness of the works offered to volunteers theoretically dissuades richer individuals, so only the poor will show up. The NREGA assumes two great functions in terms of employment: it provides an alternative form of employment since work is available throughout the year and it works as a safety net after shocks (Zimmermann, 2012). As Zimmermann (2012) put it, the programme is similar to an 'insurance'. Furthermore, the Indian government made the hypothesis that involuntary employment was an important cause of poverty. In rural areas, the poor have few financial resources and little access to credit, which expose them to great losses when they face an income fluctuation. Thus, as explained by Ravi (2015), the supportive effects of the safety net 'release poor risk averse households from their short planning horizon and [encourage] the pursuit of higher-risk-higher-return strategies such as investing in productive assets, better production technologies, and the children's education'. Besides encouraging more lucrative and riskier attitudes, sustainable public assets, such as roads or dams, built by the beneficiaries impulse productivity gains and lead to a better access to markets. Existing studies suggest that a better access to markets is associated with a reduction in poverty (Emran and Hou, 2013). Furthermore, as monitoring and the distribution of jobs are executed at a local level, it is relevant to anticipate greater social benefits.

However, backwashes exist. The two main risks are eviction and the creation of a welfare trap. Workers could turn their backs on the private sector and 'more people [could rely on being] supported to reach an aspired welfare level' (Besley and Coate, 1992). The way the policy is implemented is not flawless. The multiple administrative layers offer possibilities of embezzlement (Drèze et al. 2008). The programme forces public authorities to reinforce their organisational and planning capacities to achieve multiple goals at the same time. The NREGA 'raises a challenge to manage trade-off between fast and reliable procurement of jobs and creation of relevant and sustainable assets' (Ravi, 2015). The necessity of putting in place a reliable organisational infrastructure to manage the flow of villagers willing to work can erode states possessing a defective administration (Chakraborty, 2007). In a meta-analysis, Sukhtankar (2016) reported four conclusions that researchers agree on concerning the NREGA: 1) the policy's impacts are heterogeneous ; 2) the implementation is flawed; 3) both rural and private salaries have increased; 4) impacts on rural productivity are uncertain. To assess the impacts of the NREGA is complex because of its scale and its multiple channels of impact. One can therefore legitimately raise the question of its effectiveness.

This dissertation aims to review existing studies on the effects of the NREGA. As a review, it provides a global picture of the impacts of the programme on its four main targets: salaries, the betterment of marginalised groups, the building of sustainable public assets and the redistribution of bargaining power at the local level. Second, this study seeks to explain why the NREGA is not as successful as it could be by pointing out deficiencies in its implementation. The contributions of this thesis are various. First, it provides a synthesis of the NREGA's outcomes at the national level. By doing so, it reinforces or nuances results found by separate studies, each focused on a specific variable. Second, this thesis sheds light on aspects neglected by the literature, such as the impact of physical labour on beneficiaries' well-being and the repercussions of female employment on children's education. Third, it identifies reasons for the NREGA not to be replaced by other policies as advocates of cash-transfers stand for. Finally, this study aims to suggest improvements to policymakers.

This thesis is divided into two parts. Chapter 1 details the effects of the NREGA on the four main targets mentioned above. This chapter sets out to analyse the social impacts and the impacts on institutions. The NREGA seems effective in reducing poverty and improving marginalised groups' access to jobs (Section 1). The policy leads to the construction of sustainable public assets and an increase in villagers' bargaining power (Section 2). Nevertheless, however performant the scheme may be, it is not a perfect engine. Hence, chapter 2 moves beyond the positive impacts of the NREGA and looks at its imperfections. The scale of implementation — the whole territory of India — and the administrative infrastructure complicate date collection and comparison between states (Section 1). Organisational flaws, namely corruption and the lack of policy monitoring, severely undermine the success of the NREGA by creating leakages and collusion between officials and private actors (Section 2).

Chapter I: What Are the Effects of the NREGA?

The first chapter has two objectives: to know if the programme influences what it is supposed to and to underline some of its non negligible indirect effects. Section 1 presents the programme's social impacts, that is, the consequences of the NREGA on wages and marginalised groups' welfare. Section 2 discusses the influence on institutions and public assets. Findings show an increase in wages and participation rates of marginalised groups, improving the general economic situation. Though the NREGA seems a priori successful in alleviating rural poverty, several indirect impacts too often overlooked in its evaluation diminish its socio-economic benefits.

Section 1: The Social Impacts of the NREGA

The NREGA is by nature a social policy. It aims to reduce poverty in rural India. To achieve its goals, the policy seeks to increase salaries by providing paid work to groups previously occupying unpaid, informal jobs. Targeted individuals would then be able to save money, enjoy employment security and spillovers. These effects must reach women, Scheduled Castes (SCs) and Schedules Tribes (STs) in priority. These groups are often badly paid or unpaid as a result of their poor inclusion and negotiation power on the formal market. This dissertation presents existing evidence strongly supporting the success of the programme in reducing poverty (A) and empowering excluded groups (B), though prejudicial negative effects call for a strong response from the authorities.

A/The Effects of the NREGA on Poverty Reduction

The original goal of the policy is to reduce poverty in rural areas where formal employment rates and salaries remain low. It aims to do so via an increase in salaries for beneficiaries. Hence the choice of a law-based, bottom-up approach to provide individuals with a guarantee to obtain a paid activity for a predefined amount of time.

Along with an increase in wages (i), there is evidence of beneficiaries being less exposed to risks (ii), thus impacting their economic situation on a broader scale.

i/The Effects of the NREGA on Salaries

Salary is the variable traditionally used in the evaluation of a development policy seeking to alleviate poverty. When one studies the NREGA, one must then look at the evolution of wages. An increase in wages or even the provision of one for previously unemployed individuals or informal workers can have major impacts on poverty. Lavoie and Stockhammer (2014) showed that higher wages stimulate demand and productivity. A virtuous circle is thus created and generates positive microeconomic and macroeconomic effects. Not only the right to work is guaranteed by the NREGA, but also a minimum wage. It is a crucial point when the beneficiaries of the scheme are villagers. The choice of providing a minimum wage comes from the negative relationship between poverty and agricultural salaries reported in India (Van de Walle, 1985). Recently, Lanjouw and Murgai (2009) found a positive correlation between increasing wages and a decline in poverty rates in rural India. Sarkar (2009) studied the reasons leading to income inequality in India and concluded that the number of working days and the employment status respectively account for 24% and 11% of income inequality. Hence, it is with good reason that the NREGA focuses on those issues.

Within the programme's framework, the payment of salaries to workers is organised by the law. The inferior limit is the national minimum wage — which increased from a little less than INR50/day in 1996 to INR180/day nowadays. In comparison, in 2016/2017 the national average wage of unskilled labourers was INR159.50/day for men and INR119.92/day for women (Das and Usami, 2017). These amounts are below the USD1.90/day poverty line defined by the World Bank. Moreover, the computation of average wages at the national level masks the heterogeneity between areas and leaves unnoticed the situation of the informal workers. Thus, it is likely, especially in rural India, that real wages received by poor workers are lower than what statistics show. This explains why the NREGA provides a minium wage.

What is the theoretical mechanism through which the NREGA could increase wages? Deininger, Nagarajan and Singh (2016) identified three pathways. First, it provides individuals a paid activity at a minimum wage. An increase is observed automatically if it successfully replaces unpaid domestic labour and the occupation of an underpaid job, which are common amid Indian villagers. Second, the NREGA paves the way for a reduction of vulnerability in times of shocks. For instance, farmers and farm workers can make ends meet in case of a drought or a flood if they possess a Job Card. Finally, infrastructures built by the beneficiaries and the skills they learn lead to greater productivity rates and returns. Infrastructures can impulse economic growth, economies of scale and engender positive externalities. Roads connect the countryside to bigger towns, facilitating the transportation of merchandises and fostering trade, farmers can extend their fields thanks to irrigation canals. However, given the predominance of informal labour, the gender and caste discriminations in rural India, the positive impacts of the programme could easily be hampered.

Imbert and Papp (2015), using 2006-2008 National Sample Survey data, showed that the policy led to a 5% increase in rural wages, with a notable concentration of the phenomenon during the off-season (from January to June). As explained by Imbert and Papp (2015), 'rural adults spend on average 1.5 percent of their time on public works during the first six months of the year, and less than 0.5 percent during the last six months, when the monsoon rains have come'. Monsoons make it difficult to start construction projects and, at that time of the year, agricultural jobs are not scarce, so the number of NREGA jobs offered by the public authorities slightly decreases. The findings of Imbert and Papp (2015) affirm the success of the NREGA in reducing the side effects of seasonal fluctuations in incomes. Berg, Bhattacharyya, Rajasekhar and Manjula (2018) found similar results. They analysed the impact on agricultural wages by using monthly information on agricultural wages from 2000 to 2011. Their results suggest that agricultural wages increased by about 5% in districts with a high implementation quality, but that it took between 6 and 11 months after the inauguration of the programme for wages to be impacted. Himanshu (2011) found a 4% annual increase in wages among rural men and women workers between 2005 and 2010. Using the data provided by the 61st and 66th National Sample Surveys, he found that the number of works completed under the NREGA increased eightfold. This result shows that rural workers find the programme attractive. Mann and Pande (2012) looked at the impacts of the NREGA between 2006 and 2012. According to them, the 'MGNREGA boosted the real daily agricultural wage rates by 5.3%'. The effects are similar for men and women and mostly impact unskilled workers. A World Bank analysis (Deininger, Nagarajan and Singh, 2016) reported an increase of 10%, much more than what is reported in other studies. According to the authors, the main driver of the augmentation is an increase in agricultural wages. Farm workers saw their earnings rise by 11% while their non-farm peers' salaries remain stable.

Why did wages in the agricultural sector increase? Government hiring through the programme may lead to a rise in remunerations on the private market via a crowding out effect. If an important number of villagers turn to government jobs, it would make the supply of work fall strongly, causing an increase in private salaries. However, in the case of the NREGA, another mechanism could neutralise this effect. The 'surplus labor' thesis assigns to poor households a place isolated from the market on the grounds of their low productivity (Sen, 1966). Research confirmed the crowding-out hypothesis. Imbert and Pratt (2015) found a 1.43% decline in private sector employment due to the NREGA, associated with a 4.73% increase in wages on the market. This trend is particularly visible during the dry season when the supply of NREGA works is at its peak. These findings show that poor households are somewhat competitive. The fact that public employment impacts private salaries contradicts the 'surplus labor' thesis.

However, evidence of a positive effect on salaries is not enough to conclude that the policy is fully successful. Indeed, wages can increase for the poor as well as for the rich. If the later make the most of the programme, the philosophy of the NREGA would thus be deviated. This is the conclusion of Ghosh and Chatteree (2019). According to them, the peak of the NREGA was more beneficial to rich people (the top quartile). They examined the 'high growth period' of the scheme (between 2006 and 2011). They used the Monthly Per-capita Consumer Expenditure (MPCE) as the key variable. They found that the share of the bottom quartile in the population decreased in only eleven out of twenty-two states. Their conclusion is univocal: 'The poor are getting poorer and upper and middle classes are getting richer'. Without giving precise explanations, they evoked leakages that may occur at the administrative level. This a field that requires further investigation before drawing any conclusion.

This subsection detailed how the beneficiaries benefit from direct economic gains brought by the minimum salary provided by the NREGA. Researchers agree on saying that the NREGA impulsed a salary increase, particularly beneficial for poor farm workers, who are a targeted group. The programme thus seems successful in reducing economic poverty and counterbalancing seasonal fluctuations in incomes. Since the level of income determines many decisions and actions of a household, it is now interesting to look at the consequences of the increase in earnings.

ii/The Indirect Effects of the NREGA

As mentioned earlier, the programme does have a positive influence on wages, one of — if not the — main variable used in assessing an antipoverty policy. However, like every policy, the NREGA has indirect effects on various economic and social variables: migration of labourers, the level of risks accepted and taken by individuals, savings, just to mention a few. Given that economic poverty is one part of the problem, the NREGA is also expected to reduce other forms of poverty.

First and foremost, the NREGA works as a 'safety net'. It protects individuals from negative shocks, such as droughts or floods, causing a loss of assets or income.

Not only has the NREGA increased wages, but also ‘reduced distress migration from traditionally migration-intensive areas, [increased the] usage of barren areas for cultivation and [fostered] empowerment of the weaker sections and giving them a new sense of identity and bargaining power’ (Mann and Pande, 2012). Many consider the ‘safety net effect’ to be the principal improvement brought by the NREGA because it modifies the temporal horizon of households. This is the topic of Zimmerman’s work. Zimmerman (2012) studied the effects of the programme on job characteristics. Her work shed light on two results. First, the NREGA led to a shift from the private informal sector to family employment among men. This ‘is consistent with the idea that the availability of NREGS after bad economic shocks lowers the relative riskiness of family employment’. Hence, the employment guarantee provided by the scheme allows workers to give up badly paid informal jobs to take up agricultural activities that are more fruitful for their family. Second, the higher the risks of unpredictable rainfalls, the higher the share of workers resorting to the NREGA. This confirms its ‘insurance’ role. Individuals living in areas highly exposed to climate shocks anticipate they will take up a NREGA job in case of low rainfalls. They re-allocate their time in favour of domestic employment to save money or stock food.

Focusing on agricultural production and the choice of crops, Gerkhe (2014) reported a greater acceptation of risks amid beneficiaries. The NREGA modifies the choice of crops cultivated by households. The change is driven by the insurance effect, the increase in incomes and the irrigation facilities built by the scheme. NREGA wage-seekers are more likely to engage in higher investments in riskier but more profitable crops such as cotton, chillies and turmeric. ‘In terms of economic relevance, the results suggest that per additional day of employment generated in the block in the previous financial year, each household would increase the share of inputs allocated to cotton by 0.7 percentage points. One standard deviation increase in the number of person-days generated per job card (7.3) would increase a household’s input allocation to cotton by 5.1 percentage points and raise net income from agricultural production, ceteris paribus, by about INR486’ (Gerkhe, 2014). The scheme thus enables households to recalculate the opportunity costs of their cultivation and shift towards riskier varieties. It confirms previous research (Dercon and Christiaensen, 2011) and shows that labour programmes can increase earnings through the incitation to adopt riskier and more remunerative crops.

There is also evidence of indirect positive effects on human capital enhancement, which is an essential component of development. In the footsteps of A. Sen, the approach in terms of 'capabilities' emphasises the importance of human capital in the pursuit of development. According to Deininger, Nagarajan and Singh (2016), the wide range of jobs offered by the NREGA led to employment diversification, particularly for women and those with limited land endowments. The use of machinery and organic fertilisers increased respectively by 5.5% and 10%. It facilitated the transition towards modern production techniques. Hence, villagers gain productivity and accumulate new skills. In the medium term, Deininger et al. (2019) found a diversification in assets held by beneficiaries. Two years after the implementation started, individuals possessed more assets, especially non-financial assets. They have an easier access to assets either directly thanks to their higher incomes, or indirectly thanks to a more serene attitude towards risks leading to more lucrative activities. Thus, it confirms the greater resilience to shocks. However, no evidence of investments in land improvement was found in the short nor in the medium term.

Literature has also reported nutritional benefits brought by the NREGA. Malnutrition and under-nutrition are widespread in India and wreak the havoc on rural households (Sen and Drèze, 2011). As shown by Jha, Bhattacharyya and Gaiha (2011) and Deininger et al. (2019), nutrition was the first variable impacted by the programme. Deininger et al. (2019) reported an increase in energy intake and protein of at least 10%. These effects are observed in the short-run, i.e., one year after the beginning of the programme's implementation. Higher incomes seem to be the explaining factor. Ravi and Engler (2013) reported a significant increase in monthly per capita expenditure on food and non-food consumables. Hygiene and food security improved: households spend more on toiletries, detergents and meals. As a result, less meals (1.6 a week) are skipped and even more meals are eaten (3.2 a week) by beneficiaries. The programme also increased the probability of holding savings and reduced the incidence of depression amongst rural households. The NREGA led to higher amounts of proteins and calories consumed daily by rural households. Not only is it important for individuals and public health, but also it avoids a poverty nutrition trap (Jha et al., 2009) when hazardous nutrition leads to a weak health and low productivity, which translates into low incomes.

In conclusion, the NREGA does reduce poverty through various channels. It increases villagers' earnings by providing accessible jobs to any volunteer, without regard to skills or gender. This is a considerable improvement in rural India, where unpaid domestic jobs stymie growth and development. Monetary indicators are not the only ones to show improvement. The most effective and beneficial outcome seems to be the 'insurance effect'. The right to work empowers beneficiaries who, in return, engage in riskier activities, invest more and spend more money on essential daily products such as food. However, this overview says nothing of the consequences on marginalised groups and the advantages they obtain from the NREGA.

B/The Effects of the NREGA on the Inclusiveness of the Labour Market

'To leave nobody behind' is the motto of the UN Sustainable Development Goals. They seek to lift every barrier, such as race or gender discrimination, the absence of education or excluding policies impeding an individual to enjoy a better future. The notion of 'nobody' here means 'irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status'. One can easily see the importance of inclusiveness in poverty reduction initiatives. These objectives echo the goals of the NREGA, whose definition of poverty embraces numerous variables. This is why the Indian government puts a strong emphasis on women, SCs and STs, which are groups that have been historically experiencing discriminations on the job market. They must not be left behind in the development process of the country. This part analyses the effects of the NREGA on women's participation rate and the indirect consequences on the household's welfare (i). Then, it focuses on the effects on STs and SCs' employment (ii).

i/The Effects of the NREGA on Women's Labour Participation

In the 2020 Gender Inequality Index (GII) published by the United Nations Development Programme, India ranked 131th on 189 countries. Indian women enjoy less opportunities and suffer from education inequalities. According to the GII Index, 27.7% have at least 'some secondary education', against 47.0% of men. Gender inequalities are even greater when it comes to work: the labour force participation rate was 20.5% for women, compared to 76.1% for men. Among emerging countries, India is one of the rare to have witnessed a fall in the women's labour participation rate — it was at 36% in 2000 (Organisation for Economic Co-operation and Development). The participation rate calculates the share of a population that is economically active, that is to say the share of a population participating in the production. This ratio is useful to analyse the presence of women in the formal labour force and to determine whether or not there is an 'unpaid work' bias affecting them. Powerful social representations associate a housewife to a high social status; on the other hand, a working woman is perceived as a familial dishonour (Klasen and Peters, 2013).

In India, the participation rate of women follows a U-shaped trend. Poor and very educated women tend to work more often than women from a middle-class household, respectively seeking means of subsistance and top jobs. Agénor, Mares and Sorsa (2015) showed that the participation rate is also higher in rural areas than in cities. Various reasons explain the sharp drop in the number of female workers that occurred during the past two decades, while India's economic growth was soaring. Desai (2018) attributed the crowding out of women to the reduction of agricultural jobs — there is a great proportion of women in the agricultural sector. Moreover, in India, as well as in many emerging countries, women have more frequently jobs requiring less productive skills (World Bank, 2011). They are over-represented in the informal sector where salaries are low and the working conditions strenuous (Mehrotha et al., 2014). It means their financial contribution to the household's economy is lower than their husband's. They are thus more likely to quit their job in order to take care of the house (Khera and Nayak, 2009). Within the household, income differences and social norms make female unemployment a 'good option', being a financially reasonable choice and a sign of a sound management of the ménage. Sosra et al. (2015) and Daymard (2015) summed up the reasons explaining women's low participation rate. Four variables stand out: socioeconomic factors (prejudices and traditions), religion, poor infrastructures and low access to financial services. The researchers also pointed out the greater impact on women of 'jobless growth', that is to say a context of economic growth with diminishing employment. National Sample Surveys offer ideas to boost female employment: unemployed women are willing to work, if working conditions are decent (Agénor, Mares and Sorsa, 2015). Decent working conditions refer to fine salaries, safety of transport towards the workplace, the availability of day-care centres. All that confirms that giving the centerstage to women was an economically relevant thing to do for the NREGA.

First and foremost, it is noteworthy to look at the share of women among NGREGA workers. They are over represented: in 2019-2020, 54.78% of NREGA days of work were accomplished by women. The figures were 54.59% in 2018-2019 and 53.53% in 2017-2018 (Official website of the NREGA). By looking at the statistics, the programme seems to be rather successful in attracting women. Evidence suggests that the NREGA increased women's labour participation by between 2.3% (Azam, 2012) and 6.5% (Afridi et al., 2012). In the six states where Khera and Nayak (2009) conducted their research, 30% of women (on average) enrolled in the programme were working or looking for a work on the private market before applying for the NREGA. Therefore, data indicates that the women-targeted incentives of the policy are efficient.

Researchers agree on the strong beneficial effects of the NREGA for women. The NREGA expands the work horizon of women. Khera and Nayak (2009) and Zimmermann (2012) showed that women benefit more from the NREGA than men because they substitute public employment for unpaid private work. Proportionally, the increase in salaries is higher for women with respect to men. However, this is explained by the fact that women are usually less paid — 19% less in 2019 (Gender Gap Index). Hence, there is an amplification effect at work: women start with substantially lower salaries and reach more decent earnings. The programme offers non-discriminatory salaries that are superior to what women can obtain on the private job market. Furthermore, there seems to be a prestige effect over public jobs. Working for the government appears to be socially acceptable and has a better image than contracts between a woman and a landowner (Reddy and Upendranadh, 2010). Initiatives offered within the programme's framework or by external actors (NGOs), such as Self Help groups or female mate, boost the participation rate of women (Pankaj and Tankha, 2009).

However, to be a woman working under NREGA conditions does not mean to live in a pink world. It is interesting to look at the unexpected implications of the programme. To do so takes back to gender inequalities. Critics emerged concerning the strong implication of women in the scheme. Many pointed out an alarming feminisation of poverty. This phenomenon has been at play for many decades in India (Ghosh, 1998). By 'feminisation of poverty', Ghosh (1998) refers to all the socioeconomic factors that contribute to render women more likely to be poor than men: a weaker access to land, lower salaries, higher unemployment rate, among others. Since the NREGA offers low-paid, unskilled, exhausting jobs, inequalities reproduce themselves if women are overrepresented among the beneficiaries (Breitkreuz et al., 2017). Though NREGA salaries are higher than the average on the market, they remain low. What's more is that some say the programme does not suit women's needs throughout their life (Sudarshan, 2010). Indeed, local authorities have similar expectations of productivity and stamina for men and women. They do not take into account the participants' physical capabilities to accomplish manual labour. For instance, field surveys conducted by Marius (2013) showed that NREGA officials mostly hires old and single women. It is noteworthy to mention the scarcity of the literature on this topic. Articles or reports mentioning the age of the participants are scarce. In addition, some women must combine two days of work in one since they have another job to make ends meets (Chari et al., 2019). Thus, it is clear that the wheel of gender inequalities continue to turn.

A picture of female NREGA workers preparing a field. Nobody wears a special equipment nor a special outfit adapted to hot temperatures.
Source: The National Herald

The NREGA modifies the opportunity cost of time for families. Given the easiness of getting a job via the programme, households are able to reduce the length of their unemployment periods. This has broad consequences on all members of the family, especially women, who are assigned to the domestic sphere. Atkin (2012) reported a reduction in time intensive human capital investment concerning children. Shah and Steinberg (2015) found a 3% decrease in schooling rates for children aged 13-17 whose parents had taken NREGA jobs. Within the same group, the probability of working increased by 3%. The explanation is the absence of their mothers at home during the day. Parental supervision is a key factor in keeping schooling rates high (Bursztyn and Coffman, 2012). Due to the NREGA, women are not at home the whole day, leaving their children alone without surveillance and punishment if they do not attend classes. When both parents are gone for the day, nobody can accompany the children to school, so they stop attending classes and start working (Shah and Steinberg, 2015). This indicates that children substitute for their parents when the latter take up NGREGA jobs. Here again, a big difference exists between boys and girls. Boys take over their fathers' position as paid workers outside the home and girls replace their mothers as housekeepers. Workfare programmes, by providing jobs outside the home, can thus exacerbate child labour. Consequences on human capital are significant, leading scholars and policymakers to see cash transfer as a potentially more effective alternative.

Another major consequence is the increase in newborn mortality rates among female NREGA workers (Chari et al., 2019). Measured 24 hours after birth, neonatal deaths seem to increase by 1‰ due to the programme. Chari et al. (2019) suggested two non-exclusive channels of impact. First, as said before, NREGA works are exhausting and not always adapted to women's needs, especially when they are pregnant. Second, working women have less time to go to ante-natal clinics or to frequent health facilities.

To conclude, the NREGA allows women to have access to public employment and higher earnings. The fact that the NREGA is a public programme seems to lift the social barrier of working outside the home. Nevertheless, when one moves beyond these advantages, gender inequalities appear. Indeed, works provided by the programme do not match women's physical abilities, all the more when most of them are old. Moreover, the programme ignores the role of women within the household. As a result, the increase in women's participation rate is associated with higher neonatal deaths and a drop in schooling rates. Hence, policymakers should adapt the jobs offered to women to their physical abilities and reinforce existing educational initiatives to counterweight negative effects on children.

ii/The Effects of the NREGA on SCs and STs' Employment

Hinduism divides society into castes. A hereditary group is assigned to each individual. This determines what job one can occupy, whom one should marry, how much prestige one has within the community. Caste plays an enormous role in shaping one's self and social identity. The caste system defines a hierarchy based on four *varnas*: Brahmins (priests) at the top, Kshatriyas or Thakurs (rulers and warriors), Vaishyas (traders), and Shudras at the lowest level. There is a fifth group, called the *Dalits*, outside the system due to its 'extreme level of impurity'. Intercaste interactions have been characterised by severe inequalities (Hoff, 2004). In 1950, the newly independent government modified the Constitution to establish two groups, the Scheduled Castes and the Scheduled Tribes, particularly stricken by poverty and discrimination. The Constitution provides a list, updated regularly, of which castes fall under the two categories. According to the government, the distinctive feature is 'extreme social, education and economic backwardness arising out of the traditional practice of untouchability' (Department of Social Justice and Empowerment). The term 'Scheduled Tribes' refers to indigenous groups, mostly living in Central and North-East India, which suffer from social exclusion. According to the 2011 Indian Census, SCs and STs account for a quarter of the country's population (respectively 16.6% and 8.6%).

Why is it important for the NREGA to focus on SCs and STs? According to the World Bank, India's poverty rate in 2011 (22.5%) was half what it was in 1987 (50.6%), which is a considerable change. Looking at the distribution of poverty by caste, one finds that the share of SCs and STs among the poor increased from 33% to 40% (EPoD, 2019). Among SCs and STs, poverty rates are far higher than the national average: respectively 38% and 45% (Das et al., 2011). STs account for a quarter of India's poor population. 73.3% of the SCs and 97.6% of the STs live in rural areas. They respectively represent 18.5% and 10.4% of the villagers countrywide (National Census, 2011). Thus, they are a major concern for NREGA officials. Development of the villages cannot be achieved if SCs and STs are left behind.

The government publishes statistics about the NREGA with a focus on SCs and STs. In 2019-2020, SCs accounted for 68.96% of work days generated. It was 73.37% the year before. The share of SCs in person days of work is usually between 70% and 75%. Thus, like women, they are over-represented among the beneficiaries. Their presence in the programme gives hints of the success of policymakers to attract such a deprived population. In 2019-2020, STs accounted for 0.05% of days of work generated by the scheme. 0.05% is the plateau for this group. Hence, it is possible to conclude that STs are under-represented among the beneficiaries. Several factors explain the inadequacy between the authorities' initiatives and the needs of tribal groups (Keshlata and Fatmi, 2015), such as migration and poor awareness. Indeed, STs migrate from city to city to toil unoccupied land. They live on the fringe of society and rarely use public infrastructures. Children rarely go to school and households barely mix with the population.

When it comes to SCs and STs, the relationship between unemployment and poverty is somewhat ambiguous (Marchang, 2016). Even when an individual of these groups is employed, the benefits of an increase in his earnings is counterbalanced by obstructive socioeconomic factors. SCs and STs are traditionally destined to menial, degrading work. Institutional hindrances (Dandekar, 1986) block them to get decent jobs and escape from a poverty trap. The NREGA, including a large range of social measures, aims to tackle this institutionalised poverty issue. However, the drudgery of NREGA's work could reinforce these work inequalities. This question was pioneered by Alik-Lagrange and Ravallion (2015). Even if SCs and STs give up menial, degrading activities, 'in the case of India's National Rural Employment Guarantee Scheme the work provided is monotonous manual labor, toiling for long hours in the open sun. Nobody is likely to enjoy this work', as the authors pointed out. To dissuade rich people from showing up, the jobs provided by the scheme are by nature unpleasant and unappealing. Therefore, contradictory effects emerge from the conflict between 'workfare' and welfare', leading policymakers 'ignoring the fact that the work is unpleasant when assessing the welfare gains from the program' (Alik-Lagrange and Ravallion, 2015).

This voluntary omission raises, along with ethical considerations, the question of the evaluation of the programme. As Alik-Lagrange and Ravallion (2015) explained, 'the fact that the type of work is unpleasant for participants has never (to our knowledge) been used in assessing the impact of NREGS or other workfare schemes, nor has it been included in the theoretical models that underpin the evaluations of such programs'. As they explained, the workfare part of the NREGA outweighs the welfare consequences. In other words, the difficulty of the works is so important that it exceed the benefits on beneficiaries' wellbeing.

Thanks to the NREGA, SCs and STs can take up a public job instead of menial, degrading work. The programme protects them from informal employment. Even if it is not one of its top priorities, the NREGA, by operating as an employment insurance, could have an effect on distress urban-rural migrations. The income surplus could encourage workers to migrate or, on the contrary, people could settle where they have a guaranteed access to employment (Imbert and Papp, 2017). Distress urban-rural migrations happen 'when people have to go to cities to find work because they cannot survive on what they can earn in their own villages' (Jacob, 2008). In rural India, seasonal migration has become a long-lasting element of workers' strategy to ensure a livelihood throughout the year. Deshingkar and Start (2003) showed that the ability to migrate and find a job is highly correlated to one's economic and social assets. In other words, they found that caste operates as the strongest 'determinant of who is excluded from positive migration streams'. As mentioned above, a low-caste individual is more likely to be extremely poor, illiterate, ostracised and discriminated by recruiters. The provision of a guaranteed job and a minimum wage through the NREGA could thus put an end — at least reduce — to distress migration towards urban areas. Imbert and Papp

(2017) found a negative relationship between the availability of NREGA works and migration: 'when one more day of public employment is provided per rural adult, migration trips are shorter by 0.6 days and the probability of migrating decreases by 0.8 percentage points'. Such findings may seem surprising given that salaries on the private market are much higher. For instance, Marius (2013) reported that construction workers can earn three times more than NREGA labourers. According to Imbert and Papp (2017), the cost of migration, even if salaries are higher in the end, are outdone by the income assurance provided by the NREGA.

This subsection detailed how the NREGA impacts SCs and STs. Like women, the two groups have now access to public employment which leads to less discrimination and income inequalities. Moreover, the guaranty of obtaining a minimum wage makes it more attractive to stay in the village instead of setting out for an onerous migration journey.

Section 2: The Effects of the NREGA on Infrastructures and Institutions

Villagers' welfare is not the only target of the NREGA. Following the idea of Acemoglu, Johnson and Robinson (2005), who threw light on the impacts of institutions and infrastructures on development, Indian rulers seek to generate positive spillovers in rural territories through the building of infrastructures and the improvement of local politics. Good governance and public infrastructures can pave the way for an inclusive growth by extending opportunities in remote areas (Ali and Pernia, 2003). The NREGA contains a section dedicated to public infrastructures, institutions and environment. It aims to reshape the macro-environment of its beneficiaries to spur positive externalities. This section explains why the NREGA gives importance to infrastructures (A). A lack of public infrastructures hampers India's development (i). Rural areas are threatened by climate change and climate shocks, so the building sustainable infrastructures could combine environmental and development exigencies (ii). The NREGA wants to reshape the political organisation (B) by promoting decentralisation (i). As a result, the distribution of power is being reshaped (ii), at the village level as well as the household level.

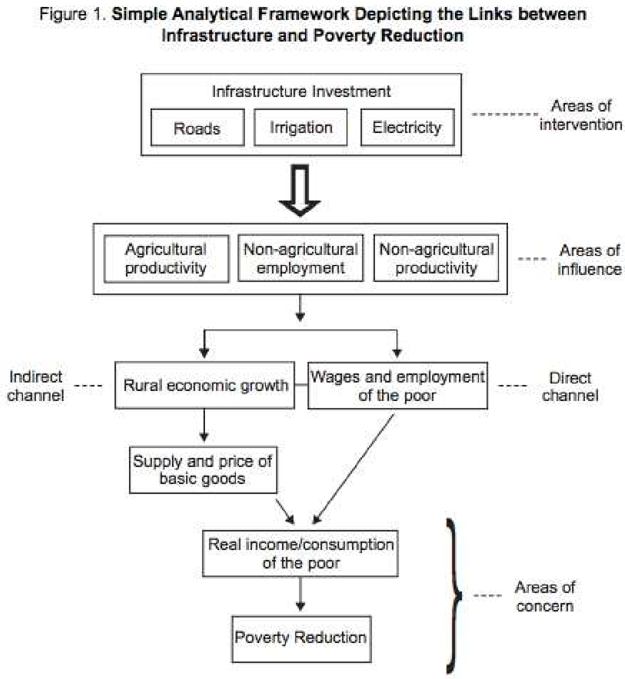
A/The Building of Public Infrastructures

The programme aims to 'create a durable and productive rural asset base' via 'works leading to creation of durable assets' (NREGA guidelines). The authorities incorporate the building of infrastructures in their guidelines to boost rural growth and development as well as the betterment of villagers. This decision was made to change the current situation, characterised by an alarming lack of well-functioning, accessible and well-governed infrastructures (Dreze and Sen, 2013) in India (i). Newly built infrastructures, along with economic gains, bring about solutions increasing environmental resilience in villages (ii).

i/The Lack of Public Infrastructures in India

'Economy is bleak without infrastructure. Hence, the prime focus of my government is infrastructure' (Modi, 2014). According to the World Bank (2019), India must invest 8.8% of its GDP or US$343 billion a year in order to develop its infrastructures to reach its growth and development expectations. The fast-growing pace of the last decades has not been followed by a sustained growth in infrastructure investments. If India does not invest heavily in roads, electrical connections or schools, the absence of proper infrastructures will acutely hamper growth. Public infrastructures are all the more important in the development process given the inequalities faced by deprived groups. The 'uncertain glory' of the country (Dreze and Sen, 2013) can be seen, for instance, in the struggle of SCs to have roads, schools, hospitals or public transport easily accessible in their villages. As related by Caldéron and Servén (2004), there is a large body of evidence on infrastructures' role in boosting economic growth and alleviating poverty. Agénor and Moreno-Dodson (2006) identified four channels of impact. Public infrastructures increase workers' productivity, complement private investment, ensure the durability of private capitals through an efficient maintenance and finally they improve health and learning outcomes. This is consistent with the findings of the Asian Development Bank (2003) on infrastructures' role in Asian emerging countries.

How infrastructures can reduce poverty
Source: Ali and Pernia (2013), Asian Development Bank.



There is no consensus among economists on what an 'infrastructure' is, though it is a common concept. Jochimsen (1966) gave the most comprehensive definition of the term: infrastructures are 'the sum of material, institutional and personal facilities and data which are available to the economic agents and which contribute to realising the equalisation of the remuneration of comparable inputs in the case of a suitable allocation of resources, that is complete integration and maximum level of economic activities.' In more concrete words, the author refers to '1/ the totality of all earning assets, equipment and circulating capital in an economy that serve energy provision, transport service and telecommunications; we must add 2/ structures etc. for the conservation of natural resources and transport routes in the broadest sense and 3/ buildings and installations of public administration, education, research, health care and social welfare'. A distinction can be made between 'hard infrastructure' and 'soft' infrastructure'. Kessides (2014) defined the former as 'long-term technical structures, equipment, and facilities [such as] roads, water supply, power grids, telecommunications networks, railroads, ports, airports' and the latter as 'regulatory mechanisms and other institutional frameworks [...] to facilitate the efficient operation and functioning of the hard component'.

This dissertation focuses on material infrastructures to assess the efficiency of the NREGA. Such infrastructures possess two distinguishing features. First, they are capital goods (Torrisi, 2009), i.e., they are the result of 'investment expenditure and [are] characterised by long duration, technical indivisibility and a high capital-output ratio'. Second, they are linked to the theory of public goods (Oakland, 1987). Beneficiaries of the programme build public infrastructures, that is to say they are non-rival and non-excludable. Therefore, everyone can use them without having to pay and the use of the infrastructure by an individual does not reduce the consumption of others.

In order to achieve sustainable and inclusive growth beneficial to all rural citizens, India must modernise its infrastructures. By doing so, jobs will be created and the inclusion of remote areas will be guaranteed, improving well-being and capabilities of marginalised groups. India ranked 66th out of 137 countries in basic infrastructure according to the 2018 Global Competitiveness Report (World Economic Forum, 2018). It ranked 89th in 2012, which means the country is steadily moving forward. However, compared to other emerging countries with high-growth rates, India's improvements are modest. Agarwal (2015) explained this stagnation by the sustained demographic growth and interstate and rural-urban disparities. Those phenomena put infrastructures on pressure and make their development essential in order to maintain growth. To make things move forward, the 2007-2012 five-year plan gave prominence to infrastructure investment: the share rose from 4.7% of the country's GDP to 7.5%-8%. The 2012-2017 went even further by consecrating 10% of the GDP to new infrastructures. The government is willing to act. Indeed, many investment projects are carried out by the state. Central and regional States still manage most of the public infrastructures. Governmental agencies play a major role by mitigating the low presence of private actors in India, as well as in several emerging countries (Estache, 2007). Private firms, especially foreign ones, are reluctant to massively invest in India because of an uncertain rate of return, due to the perception of India as a risky country.

The OECD considers India as a risk 3 country, which places it in the group of upper emerging economies. However, it is still considered riskier than rich developed countries, which implies a higher cost of capital for private companies. Estache and Pinglo (2005) studied the expected rate of return needed in emerging countries for a private company to start a project: it needs to be 2% to 3% higher than in developed economies. Hence, in a country like India, public authorities take responsibility for building facilities. Given the limited financial ressources at disposal, they cannot implement all the projects, to the detriment of remote rural areas where the poor live. There is also evidence of a relationship between differences in infrastructure development and inter-regional disparities within a country (Estache, 2007). As shown by Dreze and Sen (2007), it explains most of the avance taken by Southern states, such as Kerala or Tamil Nadu, compared to poorer Northern states, such as Bihar. It is noteworthy to point out the change in the political attention given to the matter. Kapoor and Ravi (2021) dissected budget speeches from 1970 to 2021. 'Infrastructure' is the second most mentioned term (13 times per speech on average), behind 'growth' (15 times on average). This illustrates the prominence of the issue for the government: to keep on track towards sustained growth, it is essential to create an efficient network of infrastructures beforehand.

What is the current state of India's material infrastructures? The global picture is rather mixed. Progress has been unequal among regional states and poor quality is often the norm. If no drastic measures are implemented, difficulties in maintaining high levels of growth are likely to emerge (Agrawal, 2015). A comparison with other emerging and developed countries is useful to get a view of what India needs to do to compensate its failures. For instance, road density by land area (per 1.000 sq. km) was 1.250 in 2010, far better than BRICS, emerging countries and close to developed countries' standards (Agrawal, 2015). However, roads' quality is often poor, which prevents a fast and reliable supply chain system from working properly. Half of the roads are paved, against 84% in the West. Roads are only one example among others. Villages in rural India lack irrigation facilities, dams or bridges.

The current state of Indian infrastructures hampers economic growth and human development. Thus, setting as an objective of the NREGA the construction of infrastructures in rural areas can solve this problem and link it to poverty alleviation and development goals. It is in accordance with the cross-field approach promoted by the UN in order to address several issues at a go.

ii/The Construction of Sustainable Public Infrastructures

From the very beginning of the programme, authorities have been looking at new infrastructures and environmental protection as two faces of the same coin. Official texts mention the rejuvenation of natural resources, the creation of durable and sustainable assets. It is coherent with a major change that recently occurred in academia and public policies: the emergence of notions such as global warming, anthropocene or climate change. Economics and political economy now include environmental issues in their models, which gave birth to the new field of 'ecological economics' (Holt, 2010). The discipline aims to go beyond classical theories based on a separation between human activities and the environment (Dumont, 1977) by incorporating new ways of conceptualising interactions between ecosystems and economic systems (Costanza, 1989).

As a component of economic systems, infrastructures stick out as foundational pillars of sustainable strategies. In its 2018 report, the International Panel on Climate Change highlighted the 'rapid and far-reaching transitions in energy, land, urban and infrastructure (including transport and buildings) and industrial systems' needed to maintain the temperature rise below the 1.5°C limit. Along with massive investments, a new political mindset is required to put environment and public goods at the centerstage of public policies.

To better understand why the NREGA gives such significance to this theme, one can look at the Indian case through the prism of environmental externalities. Indeed, its variety of landscapes and specific meteorological conditions make India particularly exposed to natural disasters. Global warming and land warming worsen the situation (Chandrashekhar, 2017). According to the World Resources Institute (2017), every year, India loses USD14.3bn because of floods. India is also strongly impacted by negative environmental externalities. For instance, the Global Burden of Disease reported 1.1 million premature deaths due to air pollution in 2017. Those phenomena directly affect the NREGA guidelines. As shown by researchers in political ecology, poor and marginalised groups suffer from environmental inequalities, 'which refer to a situation in which a specific social group is disproportionately affected by environmental hazards' (Brulle and Pellow, 2006). A double burden hits the poor. On the one hand, they live in polluted environments, putting their health in danger. On the other hand, health facilities are hardly accessible in case of an emergency or a need for a cure because they are located far from the villages.

First of all, the NREGA offers certain types of work that trigger the building of sustainable assets. The programme promotes projects that benefit the community and match villages' specificities, such as dams, the renovation of water bodies or field bunding. By nature, NREGA assets are expected to positively impact ecosystems in various ways. They embrace land management, harvesting, water conservation or tree plantation (Tiwari et al., 2011). Since the infrastructures that are built are easily accessible and measurable, the villagers can see what the programme brings in their daily life and public authorities are able to assess what the programme effectively produces. As Rao et al. (2013) showed, beneficiaries accomplish works that reduce the vulnerability of an area stricken by natural disasters.

Moreover, facilities directly impact individuals' well-being and working conditions. For instance, the installation of irrigation networks advantages farmers who struggle to maintain their activities when a flood or a drought destroys their land. Infrastructures related to water management prove useful for individuals, especially women, who sweat blood to get access to pure and drinking water. Rao et al. (2013) pointed out that resilience is one of the main contributions of the programme. NREGA workers build infrastructures that help villages to respond to the consequences of climate change. Dams and land renovation generate positive environmental benefits, useful in adjusting to low rainfalls, regular floods or droughts.

The detractors of the programme attack the NREGA on the completion rate of project. According to them, the projects are rarely finished and most of the time of little interest, even for villagers. Data on this subject is hard to collect due to the large geographical area covered by the programme and the remoteness of some villages. A solution is to conduct surveys among the beneficiaries and the villagers. Kulkarni et al. (2015) interrogated 4.881 users of NREGA infrastructures in Maharashtra. 90% of the respondents deemed the infrastructures 'useful or somewhat useful'. Only 8% had a negative opinion. Furthermore, Kulkarni et al. (2015) showed that infrastructures are functioning and used in the long-run, thus proving their quality. Similar results have been found by Fischer (2020). 90% of 1.400 households in 35 villages of Himachal Pradesh said they benefited from at least one project built by NREGA workers. Projects reach a large number of individuals because they improve rural connectivity and water management. Roads, paths and bridges allow villagers to seek refuge in cities or bigger villages in case of drought or floods. It also facilitates trade and reduces travel time.

Bhaskar and Yadav (2015) studied the effects of wells built under the NREGA in Jharkhand. The first striking result is that wells are widely used and perceived as useful assets. Villagers and farms use them on a regular basis. They provide water 'to grow vegetables and other high-value crops, but also to bathe, water domestic animals and even grow fish'. The authors also reported a financial rate of return of the wells of 6%, which is rather honourable. The second striking result is the completion rate of the projects. Out of 1.000 wells construction projects, 70% to 80% were completed. This contradicts detractors of the programme who often point out the incompleteness of projects carried under the NREGA.

An improvable point is the quality of assets. The building of high-quality infrastructures is not always guaranteed. Early in the implementation of the programme, the World Bank (2009) reported 'a lack of technical support to communities as input to planning MGNREG works (e.g., through resource mapping exercises) as well as the shortage of technical staff in designing and supervising works'. Although improvements have been made, it is important to keep in mind two things. First, in some areas the completion rate of the works remains very low: less than 10% as reported by the World Bank (2009). Second, infrastructures built under the scheme are village-centred. They improve the well-being of villagers and enhance their capabilities, but their scope remains restricted. Having said that, it is clear that, in coordination with other public policies, the NREGA could provide the basic infrastructures needed for an employment boost in rural areas. But they will not initiate a revolution in villages because they remain basic.

Studies generally focus on good externalities brought by the programme and pass over negative ones. As a result, there is a lack of literature on observable harmful effects of the NREGA. Rao et al. (2013) questioned a potential link between the productivity boost generated by new infrastructures and detrimental agricultural practices. For instance, wells, dams, irrigation networks allow farmers to grow more and more easily. Ensuing gains in land fertility boost productivity and encourage the cultivation of intensive crops. Yet, this trend has consequences on farmers' practices, notably on waste management. Not much has been written yet on the subject, which makes it arduous to theorise and explain.

An example of a water conservation project. NREGA workers build ponds in order to secure irrigation during drought and to maintain sufficient water levels in the soil.
Source: Ministry of Rural Development

Behrer (2019) gave a first trailblazing insight based on evidence between rising incomes and the mechanisation of farmers' work in China reported by Ebenstein et al. (2015). If the NREGA provokes an increase in salaries, which is the case as explained above, then farmers would be incited to substitute machines for workers. The shift towards machines is likely to increase harvest waste, since combine harvesters leave more residues on the field. These residues have to be evacuated quickly before the next sowing period. In remote areas, rural farmers do not have access to waste management plants nor have adequate equipment to process them. Stubble burning is thus the easiest and cheapest way for farmers to get rid of crop residues. But the burning of crops engender detrimental health effects, notably via air pollution. It releases particulate matter (PM2.5 and PM10) that attacks and weakens the respiratory system, leading to higher risks of lung and heart diseases. Negative effects of air pollution due to crop burning in India is well-documented (Shyamsundar et al., 2019). Bikkina et al. (2019) estimated that this agricultural practice accounts for 40% of Delhi's pollution in winter.

Irrigation canals facilitate the cultivation of several crops (rice, potato, garlic).
Source: Ministry of Rural Development

According to Behrer (2019), since the beginning of the NREGA, fires due to crop burning have risen by 9% to 21%. Higher salaries likely led local farmers to use more machines. The author rejected a demand-driven impact. No evidence of a 'consumption effect' that would have caused the production to increase has been found: both the surface of cultivated land and the quantity produced remained equal to pre-NREGA levels. Moreover, contrary to other findings, Behrer (2019) dismissed the thesis of a shift towards high-value crops that would have required an intensive use of combines. Behrer (2019) shed light on a field that needs further investigation. He provided a major contribution about the effects of workfare programmes on health.

Employment schemes leading to a rise in incomes may provoke an increase in pollution that governments and researchers must take into account in their assessment of a public policy. Behrer (2019) suggested that policies such as the NREGA, since they modify agricultural practices, should be accompanied by specific agricultural measures in order to create a virtuous convergence.

Infrastructures built by the NREGA are compliant with environmental criteria. They facilitate daily life's chores as well as agricultural activities. They are deemed useful by locals, no matter of their social background. Further evidence of they long-term effects and efficiency is needed to know whether or not they start the engine of rural development. Indirect costs, such as a boom in stubble burning, requires investigation because they could exceed benefits. Hence, it seems crucial to take into account the programme's negative externalities affecting public health and increasing pollution. The understanding of the situation could be facilitated by the change in political practices, giving more room to decentralisation.

B/The Change in Political Practices at the Local Level

The NREGA does not only focus on the economic and social aspects of rural life, it also aims to influence local politics. At the village level, more power and responsibilities are given to GPs, responsible for the allocation of jobs, the distribution of job cards and the management of funds. Its implementation being guaranteed by local administrative units, the NREGA is expected to be tailor-made to specific situations, thus leading to better results. Concerning citizens, the programme has in view the empowerment and social inclusion of the beneficiaries, especially marginalised groups. By nature, empowerment and social inclusion include rights, representation and the ability to make his voice heard by political authorities and within social groups. The effects of decentralisation brought by the NREGA will be discussed in the first subsection (i). Then, the second subsection presents the greater bargaining powers won by the beneficiaries of the programme (ii).

i/The Effects of Decentralisation on Local Governance

As mentioned before, *Gram Panchayats* handle the implementation of the NREGA. Here, decentralisation and representativeness are the two key concepts. After Independence, India built itself as a nation on the ideas of federalism and the delegation of powers to inferior administrative units. This choice was influenced by three variables: the socialist ideals of the political leaders of the time, strong historical differences between regional states and Gandhi's theories (Guha, 2007). As Fischer (2016) explained, decentralisation is associated with a greater participation of the civil society. Citizens taking part to society's debates on what elected leaders should do is a fundamental characteristic of good governance, reinforcing and legitimising democracy. As Faguet (2014) put it: 'the strongest theoretical argument in favour of decentralisation is that […] it will improve the accountability and responsiveness of governments […] so as to increase citizen voice and change the deep incentives that public officials face'. Public officials have the tools to implement the NREGA in accordance with their objectives and villagers' needs. Hence, they are better armed to address poverty issues at the local level than the central government or regional states.

Manor (2013) described the delegation of powers happening under the NREGA as 'the largest downward transfer of funds to democratic local government ever, anywhere in the world'. In 2020-2021, the government allocated almost USD10.4bn to the NREGA. Most of this sum is directly handled by GPs. Local implementation can be seen as an imperfect but effective solution to asymmetry of information in comparison to a centralised government controlling every aspect of a policy. This dissertation focuses on two variables of good governance : administrative organisation and violence.

The founding principles of decentralisation suit NREGA's objectives. Decentralisation is 'the transfer of authority and responsibility for public functions from the central government to intermediate and local governments or quasi-independent government organizations and/or the private sector' (World Bank, 2019). According to the classification produced by the World Bank, the NREGA implies a threefold — political, administrative and fiscal — decentralisation. Evidence shows that local authorities have more and better information on citizens than the central government, so the allocation of resources by the former can more easily match the preferences of citizens (Rodríguez-Pose and Tselios, 2019). Civil violence should thus decrease since the NREGA paves the way to local and bottom-up forms of governance. Two theories back this hypothesis (Khanna and Zimmermann, 2017). First, state benefits increase the opportunity costs of being a dissident, thus weakening rebel groups. Second, a decentralised policy considering poor citizens' needs as the number one priority boosts the popularity of public authorities and civilian cooperation.

The NREGA is based on the idea that decentralisation always fosters good governance and boosts the economy. This idea has found proponents among prestigious institutions such as the World Bank. However, the relationship between decentralisation and governance remains unclear. On the first hand, decentralisation is associated with political accountability but on the other hand it could bring out clientelism. Maiorano, Das and Masiero (2018) looked for a potential link between the decentralised roll-out of the NREGA and clientelism by comparing how Rajasthan and Andra Pradesh are implementing the programme. In Rajasthan, GPs take on the execution of the NREGA while in Andra Pradesh a special system is in vigour, excluding them from the process. This task falls to the Field Assistant, an employee of the state government operating at a higher echelon. The decision of having a different system originates in the opinion of local officials on GPs that are known for having outdated equipment or reprehensible behaviours.

The NREGA is expected to reduce the level of violence and nip rebellions in the bud by providing a livelihood to poor citizens. This hypothesis is confirmed by the findings of Dasgupta, Gawande and Kapur (2017), who studied the impacts of the scheme on Maoist feud in six states of Central and East India. They reported a decrease in violent events (less violent accidents and less deaths) after the implementation of the programme. NREGA jobs are a reliable source of income for villagers, especially after an external shocks, which makes the population less resentful towards public authorities. According to Fetzer (2019), the NREGA plays a major role in stopping conflicts driven by weather shocks. Negative weather shocks, such as drought of floods, have been identified as initiators of conflicts (Bazzi, S. and C. Blattman, 2014) as they drive down salaries. The NREGA provides an insurance to rural households whose incomes are low and volatile due to weather uncertainties.

As Fetzer emphasised, this has tremendous implications in a period characterised by global warming and more frequent climate shocks. Large-scale social programmes mitigate adverse shocks effects on salaries and violence. The results corroborate what has been said before, that is, the quality of implementation matters: pacification effects are greater in districts with a strong and efficient bureaucracy. This adds to the body of literature on development programmes' impacts on violence, which, for the moment, has not reached a consensus.

Khanna and Zimmermann (2017) underlined an interesting event by focusing on the short-run. Violence caused by the Maoist conflict increased during the first months of the roll-out, then dropped in the long-run. Khanna and Zimmermann (2017) explained this phenomena by the citizens-authorities cooperation theory. During the first months, attacks initiated by the police increased, as well as assaults on civilians by rebels. By cooperating with the police, civilians gave precious indications about rebels plan's. In return, rebels sought revenge on villagers for what they perceived as a betrayal. This has two major implications. Development programmes can foster cooperation between the citizens and rulers, hence initiating a virtuous circle. Moreover, this shows that antipoverty efforts leading to cooperation allows policymakers to resolve conflicts, instead of using force, through a better circulation of information.

In a nutshell, the NREGA promotes local decision-making. Local authorities have more information so they can implement tailor-made initiatives. The reduction in violent events is an example of the advantages brought by the NREGA. However, decentralisation does not exclude flaws (corruption, leakages) from happening.

ii/The NREGA Increases the Bargaining Power of the Beneficiaries

Besides giving more power to local officials, the NREGA aims to empower citizens. As defined by the UN, empowerment is 'the process of enabling people to increase control over their lives, to gain control over the factors and decisions that shape their lives, to increase their resources and qualities and to build capacities to gain access, partners, networks, a voice, in order to gain control'. Not only does it include economic empowerment, but also political influence. This implies that the beneficiaries of the programme get access to the political scene. At the local level (GP), political representation for marginalised groups is guaranteed by the 73rd Amendment of the Constitution, in effect since 1993. This amendment states that, within a given district, one-third of GP counsellors and one-third of all the Pradhans (GP representative) must be women. Moreover, there are reserved positions for SCs and STs, calculated on their share among the total population in the district. Political representation in GPs is crucial for marginalised groups, because GPs make decisions regarding development policies, local infrastructures and the allocation of funds. Local governance enables villagers to exert a greater influence on politicians and to level the asymmetrical balance of power between the two groups. Seabright (1996) summarised the issue to an incomplete contract subject to recurrent examination. At the local level, policymakers and leaders are directly accountable for the decisions they make. The vote of local dwellers, proportionately, has more 'weight' compared to elections at a higher administrative level. Thus, incentives drive politicians towards the respect of their electorate.

Another actor to take into account when studying the NREGA is the mass of NGOs involved in the programme. They play an active role in India's political system as citizens' mouthpieces. Within the NREGA's framework, they are in charge of ensuring the transparent and fruitful implementation of the scheme. As Dagnino (2010) said, 'civil society and the state are always mutually constitutive'. NGOs are not strictly separated form the political sphere. As Lewis (2011) underlined, the transfers of professionals from one sector to the other are frequent, and so is the transfer of knowledge between the two spheres. As supporters of the people's cause, NGOs have to be distinguished from traditional firms or public institutions. They emerge from the voluntary association of individuals gathered around a mission with positive social impacts. This wish remains at the core of the decision chain, thus their employees are likely to be committed and altruistic (Kaine and Green, 2013). Moreover, their staff usually come from the surroundings of where they intervene, so they can design solutions in accordance with villagers' needs in the case of the NREGA.

Many studies have reported a positive relationship between decentralisation and political participation, in developed and emerging countries (Stoyan and Niedzwiecki, 2018; (Huther and Shah, 1998). In a decentralised configuration, government, through its agencies, is closer to the citizens who, in return, can more easily target 'where' to make their voice heard. Thus, this provides incentives to local leaders to include more largely villagers' preferences in their decisions. Decentralisation also empowers citizens by lowering the scope of corruption. Government bureaus being smaller, public servants have a lower amount of rents at their disposable to divert. However, in the case of India, benefits have to be balanced with evidence of the importance of the administrative configuration. As shown by Fan, Lin and Treisman (2009), a multiplication of administrative layers and an intricate repartition of power could translate into higher corruption, by hampering the policy monitoring.

As explained above, the NREGA helps marginal groups improve their socio-economic status. Let us take the example of women. Thanks to the NREGA, they have access to paid and secure jobs emancipating them from patriarchal norms. The journey is long before reaching equality but the programme marks an improvement for women. Now they earn and manage their own earnings, which led to a change in domestic roles for households benefitting from the scheme. As Pankaj and Tankha (2010) explained, this had three effects on gender relationships at the household level. First, women now have a paid job and gave up unpaid domestic work, hence the welfare of the family is not men's duty only. Second, the NREGA enhanced their intra-household consumption power, i.e. women decide how to spend the money their earn in order to meet their needs. In areas where the authors conducted their survey (Bihar, Jarkhand, Himachal Pradesh and Rajasthan), 71% of women benefiting from the NREGA are able to meet their personal needs thanks to their own salary, against 44% before the implementation of the scheme. Third, women have now more influence on decisions within the household. The authors reported 71% of women spending at least a part of their income as they wished. This broadens their horizon. It is now possible for them to buy furniture, to renovate the house or even to visit their relatives without financial support from their husband.

Besides wage gains, women won bargaining power within the household. Contrary to Becker's altruistic model (1965), Indian households' resources are not pooled nor distributed benevolently in everyone's interest. Intra-household decisions display conflict, disagreement and a tilted balance of power (Agarwal, 1997). With regard to what is mentioned above, Indian women suffer from a deficit of bargaining power. The NREGA changed that. For instance, women who benefitted from the programme show greater control on their earnings. Up to 79% of them collect their salaries by theirselves. 68% conserved them (GBPSSI, 2009). Narayanan and Das (2014) reported cases in several states of households sending only women to work for the NREGA, which is a major change in mentalities regarding work traditions.

Concerning SCs and STs, here are the words of an upper-caste landlord reported by Das and Maiorano (2019): 'it is very sad that people now feel free to challenge the rules that regulate the village and we can't do anything about that. Sometimes you want to kill yourself because of the humiliation that you have to go through when you deal with them'. From the caste perspective, it introduced a major change in labour relationships. It liberated, although not fully, lower castes from bond labour. Breitkreuz et al. (2017) underlined cases of low-caste labourers refusing to work for private farmers and evoking NREGA as an argument to obtain higher salaries.

To sum up, the beneficiaries of the NREGA see their bargaining power being increased. At the village level, their political voice is louder. At the household level, women and marginalised groups can stand against discriminating practices. For instance, women control their earnings and make their own decisions concerning domestic matters. SCs and STs, thanks to the employment assurance and the minimum wage guaranteed by the NREGA, can refuse to bow to upper-caste landowner's demands.

Chapter 2: What is Hampering the NREGA?

The second chapter sets out to do two things. First, it seeks to explain why the complexity of assessing the NREGA makes it difficult to know how efficient the programme *truly* is. Second, it says something about several phenomena that threaten and undermine the NRGEA. By doing so, Chapter 2 aims to nuance the positive effects analysed in Chapter 1 by stressing two points: flaws in data collection and analysis distort conclusions drawn by policymakers and academics, public authorities could improve the NREGA by tackling corruption and investing more on monitoring procedures. Section 1 exposes the methodological difficulties encountered in the evaluation of the policy. Section 2 details the influence of corruption and the lack of monitoring on the efficiency of the NREGA. The difficulty of obtaining robust data questions the relevance of existing studies. The top priority for rulers in order to better implement the scheme should be to address corruption and poor monitoring procedures that severely impede the benefits to reach the beneficiaries.

Section 1: The Complexity of Assessing the NREGA's Outcomes

Every public policy requires serious efforts in terms of data collection. It is through the analysis of robust data compliant with scientific standards that rulers and researchers can say whether or not a policy achieves its goals. Researchers also use methodological techniques to compare different areas through time in order to identify the channels of impact. The process is time-consuming, costly and not infaillible. Part A details the imperfections in data collection and research design that complicate the obtention of robust data. Part B shows that interstate disparities in resources lead to unequal implementation quality between states, which translates into discouragement amid beneficiaries in the least endowed areas.

A/The Difficulty of Obtaining Sound Data

In its recommendations, the World Bank (2019) is clear: 'statistical data is required at the state, district, and local level to support effective policy and decision making'. Data is the rudder to steer policy in the right direction. To evaluate a policy, it is thus mandatory to set up a sound database containing information on various variables concerning the beneficiaries. For their part, researchers need to choose an appropriate method in order to proceed to the analysis. These two imperatives raise concerns amid NREGA observers. First, there is widespread suspicion about the veracity of officials reports (i) due to debatable methods of data collection. Second, it is noteworthy to examine the methods used by scholars studying the NREGA to highlight the difficulty of reaching well-established conclusions (ii).

i/Doubts About Data Veracity

Political objectives shape public policies. They reflect the will of policymakers to impulse socio-economic changes that can be observed through data collection. Hence, evidence-based policies require an efficient data management infrastructure. The veracity of the data is a pre-requisite for the analysis of public policies. If sound statistics are collected, researchers can assess the efficiency of programmes implemented by public authorities; NGOs can act as protectors of public information and government accountability. If data is corrupted, the task becomes hard, time-consuming and, in the end, impossible.

A widespread suspicion is hovering over Indian data. India has a World Bank Statistical Capacity Indicator of 76.7 out of 100. The figure has been stable since 2004. India has a better score than IRBD countries (71.8). The country loses points in 'periodicity' and 'data source' categories, but still fares decently. However, the system is put under pressure by several phenomena. In India, the bulk of social indicators and information on households is collected via nationwide surveys, of which are extracted statistical variables used in assessing the NREGA. Given the demographic growth and the prevalence of the informal sector, conducting nationwide surveys becomes more and more difficult and their timing (one every five year) does not meet the exigencies of rapidity needed to implement efficient policies. In its National Programme for Improving the Quality of Statistics in India Report, the World Bank (2019) underlined imperfections affecting indicators calculated by the government, notably methodological flaws. Some indicators, such as employment rate, combine several sources with unclear sample sizes, periods and scope.

Muralidharan, Niehaus and Sukhtankar (2020) underlined a difficulty caused by data collection methods used by the government. The bulk of the government's statistics are collected via the National Sample Survey (NSS). This is the largest household survey going on in the world. Since India's population exceeds the country's administrative capacities to conduct an annual all India survey, the NSS is divided into two rounds: a quinquennial 'thick' roll, covering 120,000 households representative of India's population, and a 'thin' roll, conducted every one or two year, concerning 35% to 40% of the thick round's sample. Thus, many studies up to now have benefited from only one thick round of the NSS to collect data on households at a large scale. This is particularly true for early studies.

Dreze (2020) explained that some statistical indicators available on the NREGA's website are biased. In fact, data on wage payment delays displayed on the website are incomplete. Charts show a decline in delays because they show half of the phenomenon. The payment of salaries is divided into two phases, the submission of a 'Fund Transfer Order' being the half-way mandatory step. Data shown on the government's website refers to delays in wage payments during the first phase only. It masks the flip side of the iceberg: most of the delays happening during the second phase, the magnitude of the phenomenon is hidden.

At the local level, politicians and public servants are responsible for collecting sound data. However, there is evidence of fraud in NREGA data reports. For instance, as shown by Niehaus and Sukhtankar (2016), the number of working days generated by the programme turns out to be voluntarily overestimated by officials for rent-seeking purposes. Opportunities of rent extracting spur fraudulent behaviours. The difference between the number of workdays recorded by officials and the number reported by workers can be twofold. To improve the quality of the data, controls thus need to be done by conducting field surveys, which is costly, time-consuming and not foolproof.

Adhikari and Bhatia (2010) also reported several cases of fraud in the keeping of official records. This renders an audit impossible and increases discredit. Let us take the example of muster rolls. Muster rolls are administrative documents of the highest importance. They contain all the information on salaries due to beneficiaries for every site. When Adhikari and Bhatia (2010) conducted impromptu visits to officials' offices, muster rolls were not available because they were kept elsewhere. Neglect also impacts the maintenance of job cards, a document of importance for each NREGA worker. This document entitles beneficiaries to apply for work as well as controlling their wage payments. Without properly filled documents, NREGA workers can be see their gains reduced by a salary loss, delays or higher opportunity costs. This, while penalising the beneficiaries, also distorts statistics.

Regarding indirect effects of the scheme, data collection is also complex. For instance, to assess the environmental impacts of the NREGA is complex. As Rao et al. (2013) reported, it necessitates long-time observations in several areas. Given the equipment (captors, data processor, etc.) and the statistical infrastructure needed to process and analyse data, the cost is very high and unaffordable for many villages. The lack of specific statistics collected by the villages hampers the evaluation. Researchers thus base their studies on individuals' perceptions of the benefits brought by the programme. Such perceptions are subject to cognitive biases.

In a nutshell, national and local databases are distorted. Data collected at the national level to build large databases is not precise enough. Corrupted officials falsify data at the local level. The difficulty of obtaining sound data is hard to overcome for researchers who rely on local authorities to get information. Therefore, the gap between measured outcomes and real outcomes is likely to be considerable. This dissertation must take into account such barriers in order to present a critical review of the NREGA. The results presented in Chapter 1 are likely to be exaggerated compared to the real benefits brought by the scheme.

ii/Methodological Issues When Studying the NREGA

The NREGA is the largest workfare programme ever implemented. It concerns more than 600 million citizens in various states, each one similar in size and population to a European country. Researchers face methodological issues with the collection and analysis of the data. By looking at these methodological difficulties, the existing literature is put in perspective and light is shed on how the methods used by the academic world could give a distorted picture of the NREGA.

Muralidharan, Niehaus and Sukhtankar (2020) shed light on four difficulties in the evaluation of the NREGA's impacts on poverty. First, there are variations in identification and data collection methods used by researchers. Second, when researchers study the impacts of the NREGA, the varying implementation quality between states is sometimes overlooked. This leads Sukhtankar (2017) to say that researchers study 'the effects of varying implementation quality'. Third, Sukhtankar (2017) underlined the limits of random control trials (RCTs), the tool generally used to study the effects of the NREGA. The NREGA's roll-out did not follow a randomised scheme: districts were chosen according to their low socio-economic levels. Regional states, when designing and launching schemes, did not randomise. Fourth, the NREGA has general equilibrium effects that impact several dimensions of the villagers' life and, as a result, make it difficult to assess them all.

Given the scale at which the NREGA is implemented, the programme has general equilibrium effects. Acemoglu (2010) defined general equilibrium effects as 'factors that become important when we consider counterfactuals in which large changes are contemplated'. Applied to the NREGA, it means the policy will have broader effects than what is expected by the government. As shown in Chapter 1, increasing wages or higher participation rates of women and SCs cannot be isolated from the drop in schooling rates or negative health impacts. The larger the scale of implementation, the broader the effects on economy and individuals. It implies that the size of groups studied to assess the programme's impacts must be vast, which is costly. As a result, most of the studies use a small database, thus giving an incomplete picture of the policy's consequences.

Due to the implementation in three phases, the effects are often measured via difference-in-differences methods. Here also, a bias emerges: there is no evidence of similar tendencies in socio-economic variables between the states. Imbert and Papp (2015) reported unparalleled evolutions in wages before the launch of the programme. Therefore, the control group is missing. This phenomenon can moderate or boost the programme's impacts on salaries.

The intricacy of the Indian political-administrative architecture complicates the delimitation of areas. In India, administrative units are not necessarily assigned to a single constituency, which impacts the implementation quality. Gulzar and Pasquale (2016) observed a better implementation of the NREGA in blocks that are associated with only one constituency. In these blocks, the number of working days generated by local authorities is 8.8% higher than in blocks split between several electoral districts. According to Gulzar and Pasquale (2016), a united block-constituency configuration prompts politicians to promote the NREGA and the creation of jobs, thus resulting in better results. Therefore, this bias should be taken into account in the selection of districts for a survey. This bias pertains to the political division of territories, a phenomenon completely extraneous to the NREGA, but with significant influence.

As explained by Sukhtankar (2017), many articles on the effects of the policy use regression discontinuity as their statistical method. This choice mitigates the impossibility of randomisation concerning the programme. Nevertheless, the use of regression discontinuity asks the question of how the roll-out was planned. As Sukhtankar (2017) put it: 'this idea is based on the assumption that MGNREGA phases were assigned by an algorithm based on an underlying continuous variable that measured backwardness, with an arbitrary cutoff determining the 200 districts assigned to Phase 1'. But there is evidence of states and districts prioritised by the government on political grounds. As shown by Chowdhury (2014), districts affected by Naxalite conflicts were on top of the agenda. This is to be considered because Pitt, Rosenzweig Gibbons (1993) showed how a non-randomly implemented programme can distort estimates of its effects. If areas notably in need are chosen, estimates will tend to be higher than what they really are. To secure more votes, politicians, as candidates running an election, have incentives to implement a social programme in areas where the poverty rate is high, so they can persuade beneficiaries of their benevolence and care. In India, the practice has already been documented. Previous national development programmes were tainted by political motivations, such as the National Food for Work Programme (Gupta, 2006). In the same manner, Chowdhury (2014) reported a political use of the NREGA as a popularity tool in the race between the BJP and the Indian Congress. Therefore, the randomness of its roll-out appears politically flawed, questioning the possibility of obtaining external validity when assessing its effects.

Sukhtankar (2017) examined two less employed methodological strategies: studying household panels and drawing comparisons between participants and non-participants. As explained above, the size of the sample must be large in the case of the NREGA. Household panels then do not satisfy statistical requirements. As for the distinction between participants and non-participants, one needs to keep in mind the spill-overs induced by the policy. The NREGA has indirect effects on non-participants, such as landowners or children. Here also, researchers omit general equilibrium effects. For instance, an increase in women's participation rate may pave the way to the reduction of discriminations and female empowerment. But, Shah and Steinberg (2015) showed that more women at work means less surveillance at home and less time given to children, which translated into less children going to school. This illustrates the fact that one should not overlook prejudicial NREGA's effects on human capital by focusing only on the positive ones.

To sum up, the obtention of sound data is an issue, to analyse them is another. When studying the NREGA, researchers face several methodological barriers that have nothing to do with the policy itself. The analysis is complicated by the administrative division of territories, the planned roll-out of the scheme and significant interstate socio-economic disparities.

B/Regional States Implement the Policy in Different Ways

The NREGA is a national programme. It is based on a delegation of powers from the central government to regional states. The Ministry of Rural Development allocates funds to regional states. Though the budget is a key component of the success of a policy, it needs to be backed by an efficient organisation. The implementation of the NREGA requires serious and productive public servants. Regional states are autonomous in the use of funds and are responsible for the implementation of the programme in the field. Bureaucrats at the national level posit that every state has the resources needed to proceed to the well-planned implementation of the NREGA. However, the reality is not as simple. Each state has a peculiar bureaucratic structure and historical legacy that make every NREGS unequal in quality (i). A 'discouraged worker' effect appears in states unable to maintain a good implementation (ii), although the causes have nothing to do with the programme *per se*.

i/States Have Unequal Resources at Disposal to Implement the Policy

A key element of success for a public policy is the quality of its implementation. Another essential point is the socio-economic context. Indeed, public policies are part of a specific environment shaped by various variables: history, relationships between local groups and administrative institutions. The NREGA is implemented in different territories that do not start from the same point. Some have less advantageous resources and weaker institutions, thus making a comparison biased.

The implementation of the NREGA relies on public institutions: the Central government, regional States, *Gram Panchayats*, to name a few. Neo-institutionalist historians showed that institutions are a product of history (Hall and Taylor, 1997). They define institutions as a set of rules, formal or informal, in the broad sense of the term: social norms, representations, routines or customs. These rules influence the relationship between policymakers, politically influent actors and institutions. Thus, every actor, as long as he produces rules or interferes in political decisions, is shaped by institutions as well as he is moulding them. The past can survive in today's configuration either by still defining the nature of an institution (*path dependence*) or when new institutions are built upon old ones as an addition (*layering*).

The history of modern India has been marked by British colonisation. The British *Raj* impacted political institutions and customs, law and the balance of power between social groups. Misra (2019) provided an insight of how institutions and customs inherited from the British rule influence the implementation of the NREGA. The British established the *zamindari* system to collect taxes. Arable fields were categorised according to two configurations. In landlord-based districts, *zamindars* owned the land and collected the taxes. In non-landlord areas, individual farmers were in charge of collecting revenues. As a result, in landlord districts, *zamindars* became a political and economic elite. Banerjee and Iyer (2005) showed that the consequences of the *zamindari* system in public policies were significant, even after its abolition in 1947.

Nowadays, landlord areas are characterised by lower investments in agriculture, health and education. The NREGA, as it gives rural citizens a right to work, could minimise the political influence of landlords and increase citizens' power.

As explained by Misra (2019), the colonial revenue system created a social group, the landowners, that controls political negotiations at the village level. Concerning the salaries, 'high inequality in landownership in landlord districts creates monopsonistic labor markets characterised by surplus labor which depress wages'. Results showed that the *zamindari* system eradicates positive effects the NREGA is supposed to have on rural salaries and citizens' empowerment. In landlord districts, wages did not increase whereas in non-landlord areas Misra (2019) reported a 6.4% increase. Moreover, in landlord districts, time spent by workers in private employment did not decrease while in non-landlord districts, it decreased by 3 percentage points. The reason could be that women substitute public employment provided by the NREGA for unpaid domestic work. The percentage of women giving up unpaid domestic work is higher in non-landlord districts than in landlord areas. Misra (2019) also reported a lower provision of public employment in landlord districts.

The legacy of the *zamindari* system thus hampers he NREGA in various ways. First, landlords benefit from an advantageous socio-economic and political position. They control the access to agricultural ressources. Rural workers depend on them to get a job, financial help and access to agricultural resources. Therefore, they drive the political economy in villages by controlling local institutions in charge of implementing the NREGA. Indeed, the fact that wages in landlord districts did not increase after the launch of the programme means they had the market power to keep them low. In impoverished villages, the phenomenon is stronger due to tied labour and weak access to NREGA jobs. It is noteworthy to mention that poorer states, such as Bihar and Jharkhand, were run by *zamindars* (Misra, 2019). Bardhan (1983) documented the historical inequalities between rural workers and landowners in these states: tied labour was singularly present in today's poorest states. Villagers who are not able to get a job via the NREGA have to accept lower earnings. As a result, villagers in districts with still powerful landlords are likely to rely on low-paid private employment as their livelihood. They are restrained by a weaker access to the programme since local elites yield to landowners' reclamations.

Besides inequalities inherited from modern history, the important interstate diversity in terms of economic growth, development indicators and facilities is an issue yet to be resolved. NREGS — the regional schemes — are thus heterogenous in quality. As Misra (2019) recalled, existing literature reports 'top performers' and 'worst performers'. A distinction can be traced between the states having the capacities to efficiently implement the programme and those who do not. Dreze and Khera (2009) showed that a few states stick out in obtaining good results: 'Kerala, Tamil Nadu, Rajasthan, Himachal Pradesh and Andhra Pradesh' top the ranking of employment creation and execution of the policy. On the other hand, as explained by Dutta et al. (2012), the expected benefits have not fully materialised in the poorest states like Jharkhand and Bihar. The poorest states lack the proper capacities to do as well as their better-off neighbours. However, the relationship is not systematic.

There is evidence of poor states implementing the NREGA in a successful way, as the example of Rajasthan illustrates. Nevertheless, being a poor state is undoubtedly a disadvantage. Dutta et al. (2012) observed a weak correlation between participation rates and poverty. Participation rates are not significantly higher in poor states, as the programme expected. The authors suggested two explanations. On the one hand, a 'demand effect': demand for NREGA works is higher among the poor, which is confirmed by data. On the other hand, a 'rationing effect': poor states are more likely to struggle to meet the demand of workers, which is also confirmed by data. The rationing effect operates through three channels. First, the implementation of the programme is costly. Poorer states are thus able to invest less money and can afford less expenditures. Second, the NREGA necessitates a strong, effective and reactive administration whereas in poor states, the administration is likely to be defective. Third, the poor in poor states ‘may well be less empowered’. When people have less bargaining power, their influence on local political decisions decreases. Therefore, supervisors of the scheme will give less importance to enhancing the quality of the enforcement.

A picture of a NREGA worksite. It is noteworthy to underline the intriguing presence of children.
Source: The Wire.

Let us take the example of Bihar. One of the poorest states India, it has a low participation rate although the demand from households is high (Dutta et al., 2012). Dutta et al. (2014) assumed that participation could be low because of a misuse of public funds from the local authorities. Even if evidence of embezzlement and leakages was found, the misuse of public funds did not explain the lowness of the participation rate. Ravallion et al. (2015) complemented these findings by conducting a survey in the same state. The low participation rate of villagers was attributed to a lack of public awareness. Information about the programme reaches individuals, who know the NREGA exists, but there is a global miscomprehension about its goals. As the authors reported, ‘most men and three-quarters of women had heard about the programme, but many were unaware of their precise rights and entitlements under BREGS[1]'. Respondents gave few rights answers: concerning work-related questions, the average score was 2.6 on 8 for men and 1.5 for women. The researchers explained the results by inefficient public awareness campaigns. Officials are expected to hold regular meetings in order to inform the villagers and encourage them to enrol in the programme. However, according to Dutta et al. (2014), 60% of households in Bihar reported that no meeting had taken place in a year or that they did not know about it. In Southern states (Kerala, Tamil Nadu), benefitting from higher socio-economic indicators, the situation is different. As shown by Besley et al. (2005), GPs in South India organise meetings on a regular basis. Citizens know when the sessions are held. Thus, participation rates are higher. The good functioning of the system stimulates the implication of the poor, who attend more meetings more regularly. As a result, they obtain more benefits from social programmes and public policies.

To sum up, to assess the efficiency of the NREGA at a national level is arduous. It reveals and puts emphasis on existing interstate disparities. Regional states do not possess equivalent organisational infrastructures. Hence, the implementation of the policy faces barriers on the path towards an 'average quality' in all areas. Moreover, as explained above, villagers enjoy less rights and opportunities in poorer states. The NREGA's guidelines do not take this inequality into account. As a result, villagers react to bureaucratic failures, which translates into the emergence of a 'discouraged worker' effect.

ii/The 'Discouraged Worker Effect'

The NREGA is a demand-driven policy based on self-targeting. As seen in Chapter 1, it dissuades richer people from taking possession of the works initially offered to poor people. However, another channel of dysfunction could be the renunciation to seek assistance if the beneficiaries deem the efforts to apply too

[1]BREGS stands for Bihar Rural Employment Guarantee Scheme.

important. The hypothesis here is that pessimistic anticipations from the applicants concerning the possibility of getting a NREGA job can discredit the programme and lead to an underuse.

The ‘discouraged worker effect’ was originally applied to market situations. Studying the American case, Benati (2001) defined it as ‘the tendency for groups of secondary workers to move in and out of the labor force with the business cycle, looking for jobs when these are available, while giving up job search during recessions’. Narayanan et al. (2017) applied the concept to the NREGA and proposed the following definition: ‘a situation when implementation failures discourage potential beneficiaries from seeking work’. The opportunity costs of applying for a job become higher than not doing it actively because applicants anticipate a lack of positions. Hence, they will go back to domestic work or private employment. Although this effect may drastically reduce the success of a policy, literature remains scarce on the subject. Narayanan et al. (2017) and Himanshu et al. (2015) are among the few researchers to have reported evidence of a ‘discouraged worker effect’ due to failures in the implementation of the NREGA.

In Rajasthan, Himanshu et al. (2015) reported cases of workers showing signs of discouragement after the successful first years of implementation. These workers were not actively seeking a NREGA job, but passively waiting for being given a work, because of the uncertainty of obtaining one quickly. According to Narayanan et al. (2017), implementation failures can spur pessimism amid applicants in two ways. First, a rationing of jobs offered to applicants can lower the supply, thus sending bad signals to claimants. If beneficiaries do not obtain a job because the GP does not provide one, discouragement can appear. Second, delays in wage payment can inhibit applicants to resort to the NREGA. Liu and Barnett (2013) identified more criteria that can engender discouragement. Physical restrictions, that is to say a lack of access to administrative facilities, could prevent individuals from actively seeking a job. Work requirements, such as being able to lift heavy objects or walking in the sun, can be deterrents for unhealthy or fragile individuals. Finally, other workfare and antipoverty policies that applicants can see as better options could outdo the NREGA if beneficiaries think the application process and pre-requisite are less complicated.

Among all these channels of impact, administrative rationing is the main factor explaining discouragement. Narayan et al. (2017) reported a rationing-induced 'discouraged worker' effect both at the individual and the district levels. By administrative rationing, Narayan et al. (2017) refer to 'district households who sought but did not get work' in a year due to public servants 'denying employment to those who apply'. A 10% increase in administrative rationing is associated with a 3.5% in decrease in the number of households seeking a NREGA job. At the district level, when the rationing increases by 10%, the applicants' demand fall by 8.9% to 9,2%. Their results are consistent with the 'discouraged worker' hypothesis: the greater the unmet demand is, the more discouraged claimants become. The authors reported no evidence of a 'discouraged worker' effect originating from payment delays. However, statistics related to payment delays exclude unpaid wages, which is a possible source of discouragement. Moreover, data is not immediately available, so the effects of payment delays could be diluted over years. Therefore, the implementation quality appears to be the main factor. As mentioned in the precedent paragraph, weak administrative capacities and a lack of functionaries lead to uneasy, time-consuming procedures for the applicants, thus discouraging them.

How do claimants see administrative rationing? Narayan et al. (2017) found no evidence of a deficient bureaucracy being at the origin of the 'discouraged worker effect' in the applicants' mind. Neither they point out clientelism or favouritism operating as deterrents. This is consistent with the findings of Sheahan et al. (2016) in Andra Pradesh. Narayan et al. (2017) designated climate shocks, such as rainfalls or droughts, and the weak availability of banking infrastructures as the two main causes of discouragement. Indeed, as explained in the first chapter, the essence of the NREGA is to work as a safety net for the rural poor, notably in case of negative shocks. Therefore, it is when the applicants need it the most that the programme cannot satisfy the demand. The demand for NREGA jobs skyrockets during periods of climate shocks, thus putting the administration under pressure. Applicants' distrust begins in times of emergency, when their expectations and needs are at their peak. Another factor identified by the authors is the presence of banks in the village. Although little evidence has been found, it is likely that the presence of banks facilitates the payments for administrative institutions, thus lifting the difficulty to process them.

Since the policy follows a pro-poor approach, what are the effects of rationing on the marginalised? Are they more penalised than others by rationing? Indeed, if administrative rationing discourages them more than other groups, the programme would fall short of its objectives. Liu and Barrett (2013) observed a U-shape trend in sensibility to rationing. Their findings showed a 'middle-class bias'. 'Middle-class' households, defined as households close to the poverty line, are more likely to obtain a job when they apply for than poorer and richer households. This contradicts the aim of the programme which is supposed to give priority to the poorest households. Nevertheless, it confirms that better-off individuals are also less likely to obtain a job.

Liu and Barrett (2013) reported a gender bias among the participants. Poor male-headed households are more likely than poor female-households to seek and get a job via the NREGA. In Bihar, Dutta et al. (2012) reported a rationing rate of 85% for women against 65% for men. It means 15% of women and 35% of men got a NREGA work when they applied for it. This nuances findings (Imbert and Papp, 2015) saying that the NREGA fares better among women than among men. This is consistent with existing literature on social norms on labour incentives. As mentioned above, Indian norms and traditions support male labour more than female labour. Although the policy benefits to women, it appears that administrative failures and negative shocks annihilate the positive impacts of the programme. In a normal context, NREGA jobs are very accessible for women, but when the situation becomes 'tense', the matter is different.

Administrative rationing seems to be the reason why households rarely obtain their annual 100 days of work. To not have all his applications for a NREGA job accepted is ordinary. For instance, only 13% of all the households interrogated by Dreze and Khera (2011) completed 100 days or work in a year. In West-Bengal districts, Das (2015) showed that 10% of the households obtained their expected numbers of work days, their expectation not necessarily equivalent to 100 days. Dutta et al. (2012) reported a 'national rationing rate of 44%. The rationing rate varied from 15% in Rajasthan to 84% in the Punjab. Only three states have rationing rates under 20%'.

To sum up, the 'discouraged worker effect' creates a bias in the analysis of the NREGA. Indeed, a decreasing demand of NREGA jobs does not prove the inefficiency nor the uselessness of the policy *per se*. It shows that bureaucracy is not capable of dealing with the flow of applicants and satisfying all the demand, particularly in times of negative shocks such as droughts or floods. At the same time, it confirms that the NREGA, as a guaranteed safety net, attracts rural citizens, without succeeding to give a job to all of them.

Section 2: The Impacts of Corruption and the Lack of Policy Monitoring

'It is impossible to understand policy without understanding corruption' (Banerjee, Mullainathan and Hanna, 2012). Public policies cannot be separated from bureaucracy and the political sphere. Public servants are subject to corruption for several reasons, such as rent seeking or political influence. Corruption hampers the execution of public policies. Its effects manifest in various forms, such as fund distortion or bribery. An efficient monitoring system is thus indispensable to identify and correct failures. Section 2 presents two loopholes in the implementation of the NREGA. Part A sets out to expose the issue of rampant corruption in India and how it impacts the NREGA. Part B details the effects of an insufficient monitoring system and explains why the collusion between civil servants and private actors, made possible by administrative negligence, undermines the programme.

A/Corruption in India and Its Effects on the NREGA

India is very regularly associated with corruption and a failing bureaucracy. Many have reported massive briberies, leakages or misuse of public funds. Is the same thing happening to the NREGA? This is a question policymakers need to resolve. This matter is all the more important given the fact that the NREGA targets the rural poor, a population already experiencing economic and social inequalities. Part A presents an overview of the corruption phenomenon that hampers India's development (i). Then, it seeks to analyse how corruption undermines the NREGA's effects on poor rural groups (ii).

i/Corruption in India

Although corruption is a very common term, to define it in order to clearly observe it is not easy. Very intuitive, the concept is hard to grasp at the practical level. The World Bank defines it as 'the abuse of public office for private gain, [which] covers a wide range of behaviour, from bribery to theft of public funds'. Usually related to public institutions, the phenomenon does not spare private businesses. Corruption is different from bureaucratic inefficiency, i.e., the impossibility for a public institution to reach its goals. In reality, the two phenomena are linked: causing a decrease in public servants' productivity, corruption stymies policy achievements.

Why is corruption a major political and economic concern? Bardhan (1997) found that corruption spurs X-inefficiency[2], biased decisions and rent seeking behaviours among public officials. Mauro (1995) is one of the first to have reported a

[2]A term coined by H. Leibenstein (1966), X-inefficiency describes the gap between the actual performance of an organisation and its highest possible performance.

negative relationship between corruption and growth. Corruption reduces the amount of private investment, thereby penalising a country's economy. Investments and growth are not the only two variables impacted by corruption. Lambsdorff (2003) reported a negative relationship between corruption and public servants' productivity. The main channel of impact appears to be bureaucratic quality, that is to say the ability of an administration to provide efficient services unaffected by political motives. As mentioned before, the way the NREGA is implemented is neither fully efficient nor isolated from politics. Therefore, it is relevant to wonder if the implementation of the NREGA is distorted by corruption and dishonest officials. As a workfare programme destined to help the poor, the consequences of corruption on job distribution could be detrimental.

Though it is widely accepted that corruption is detrimental for economic growth and the wellbeing of citizens, many researchers have challenged this idea. Méon and Weill (2008) showed that, in specific conditions, corruption is associated with an increase in institutions' efficiency in countries where institutions are deficient. Leff (1964), followed by Leys (1965) and Huntington (1968), is the first to suggest the 'grease the wheels' conjecture. In an imperfect world where institutions are not completely efficient, corruption could allow one to speed up procedures, thus reducing the opportunity costs of turning to public services. But this would be done to the detriment of the poor, who would be penalised by having to allocate a surplus of money and spend more time in administrative procedures. If such a thing happens with the NREGA, the benefits of the policy could be reduced by the extra-financial and implication costs needed to deal with corrupted officials.

Measuring corruption requires ingenuity. Méon and Weill (2008) listed the three main types of indicators in use among scholars. The first type is experts-made ratios: a group of experts evaluates the level of corruption in a given country. The Economist Intelligence Unit Country Risk Service is of the most famous. The second category contains perception indexes obtained after the administration of questionnaires to citizens. In most cases, international organisations and NGOs use this method. The third type — a composite indicator — is a combination of the first two. As explained by Méon and Weill (2008), this third sort ‘allows the biases of specific indices to cancel each other out, therefore determining an average opinion of corruption’. Researchers can build a database ‘for wider samples of countries because they aggregate several indices and thereby allow one index to fill the gaps of another’.

This dissertation uses two composite indicators to assess the level of corruption in India. The first one is the Corruption Perceptions Index (CPI), established annually by Transparency International. It draws data from 13 sources collecting information on corruption levels in the public sector based on the perception of experts and executives. It ranges from 0 (high level of corruption) to 100 (no corruption). Corruption is hard to define, so the CPI measures perceptions in order to give a broad view of the phenomenon. The second indicator is the World Bank Governance Indicator, which contains a Control of Corruption section. This indicator is broader than the CPI. It aggregates data from 32 sources and ‘captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as ‘capture’ of the state by elites and private interests’, not only from officials and directors. It ranges from -2.5 (high level of corruption) to 2.5 (low level of corruption). Corruption is a well-known and widespread phenomenon in India. In the 2020 CPI, Indian ranked 86th among 180 countries. The report also underlined the fact that India tops the list of Asian countries in terms of bribery rate: 39% of Indian citizens admitted to have paid a bribe in the past year. The 2019 World Bank Governance Indicator for corruption in India was at -0.23. India ranked 105th out of 202 countries.

As shown by Hanna and Shing-Yi (2017), corruption is rampant in the Indian public sector. Debroy and Bhandari (2011) suggested an annual cost of corruption of about 1.25% of India’s GDP. Negative effects induced by corruption go beyond economic losses. As the International Monetary Fund highlighted (2016), corruption weakens state’s capacities and engenders various social damages, ‘including macro financial stability, investment, human capital accumulation, and total factor productivity'. It erodes fundamental functions of the state, thereby undercutting the positive impacts of inclusive growth. Concerning India, it has been proved that corruption impairs budget allocation. It materialises in distorted budgets, leakages or rising costs. This reduces the quality of public investment, affected by palm-greasing, favouritism and embezzlement. For instance, Khera (2011) estimated that '58% of the subsidised grains allocated to the Targeted Public Distribution System are diverted'.

This dissertation focuses on the public officials implementing the NREGA and the misuse of public office. It is thus noteworthy to reflect on their motives. Why do public servants engage in corruption? A functionary does not necessarily engage in corruption for his direct benefit: a corrupted public servant can be summoned to take advantage of its position by his superiors, friends or political leaders. Many advantages can be obtained. Corruption can take the forms of bribery, embezzlement, authoritarian or coercive behaviours, rent seeking, gifts, among others. International organisations have made the end of corruption one of their top priorities to boost growth and foster development, especially in emerging countries. In 2003, the UN adopted the United Nations Convention against Corruption, ratified by the Indian government in May 2011. Two years later, in May 2013, India started negotiating with the OECD on its engagement in the 'Convention on Combating the Bribery of Foreign Public Officials in International Business Transactions'.

To sum up, corruption is widespread in the Indian public sector. Taking various forms, corruption could thus hamper the proper implementation of the NREGA. It is likely to worsen the situation of the poor rural villagers who do not have the financial nor the social resources to deal with corrupted officials without losing more than the benefits they obtain from the antipoverty scheme.

ii/The Effects of Corruption on the NREGA

As mentioned above, corruption can affect the implementation of the NREGA through various channels and at different moments (during the application, the allocation of jobs, etc.). The policy is being implemented in a country profoundly impacted by the phenomenon. Although there is a possibility for wrongdoing to be a diverted way towards more efficiency, it is more likely to count against the rural poor, especially by minimising the additional earnings they obtain from the NREGA.

Public agents' working conditions explain why they are likely to take part in corrupted activities (Niehaus and Sukhtankar, 2013a). Administrative staff are usually appointed for a short tenure. They are at the mercy of their superiors who use transfers as disciplining instruments to maintain a high level of loyalty. According to Iyer and Mani (2009), low-level bureaucrat change jobs every 18 months and stay in office for little time. Das (2001) showed that their short tenure along with the notable differences between public salaries and market wages encourage them to seek rents to learn a little extra every month. Concerning the NREGA, opportunities of illicit earnings are plentiful: they 'include control over project selection; bribes for obtaining job cards and/or employment; and embezzlement from the materials and labor budgets' (Niehaus and Sukhtankar, 2013a).

Niehaus and Sukhtankar (2013a) focused on rent extraction from the labour budget, as records are easily available. 60% of all spendings must be allocated to employment, the other 40% are dedicated to materials. Robbery takes two forms. First, administrators can directly steal the beneficiaries by underpaying them: for instance, they can pay them 10 rupees instead of 15. Second, public servants can divert money from the taxpayers if they falsify the records sent to the administration: an official can report 10 days of work while the beneficiary worked only 5 days. Rents can easily reach significant amounts. 'For example, a worker who worked for 10 days on a daily wage project when the statutory minimum wage was Rs. 55 per day might receive only Rs. 45

per day in take-home pay. The official might report that the worker had worked for 20 days rather than 10. His total rents would then equal 55/20 − 45/10 = 650 rupees, the sum of the two sorts of theft'. The magnitude of the fraud is rather striking: for daily wage projects, the total number of working days reported by officials is 78.3% higher that the number reported by beneficiaries.

Adhikari and Bhatia (2010) observed many cases of exploitation of workers by officials. A widespread custom for officials at the local level is to make a deal with workers in order to fraudulently extract them money. They threaten beneficiaries with the 'you may not get a job next time' argument to force them to accept informal contracts. Workers accept to work for a salary inferior to the guaranteed minimum wage, while officials record full-payment on muster rolls. For instance, in Deoghar, Jharkhand, the observed salary was RS60 a day, well below the minimum wage of RS92 in vigour. Workers are generally aware of the fraud. The official with whom the deal was made accompanies them to the bank when they collect their payments. This shows that online payments through banks do not put an end to corruption, it only makes it change its nature.

Niehaus and Sukhtankar (2013b) reported another example of leakage. Between March and June 2007, the legal minimum day salary paid to NREGA workers increased from RS55 to RS70. The authors looked at how much of the increase reached beneficiaries, in other words, what is the share of the 15 supplementary rupees going into workers' pockets? Their results are univocal: 'none of the wage increase was passed through to workers'. Officials diverted the totality of the increase. In contrast, before the salary increase, wage payments were not impacted by leakages, at least not to that extend. The marginal rate of corruption reached 100% after the increase, without causing turmoil. How is it possible? The authors rejected the 'voice' hypothesis theorised by Hirschmann, that is to say, 'the idea that rule-bending is kept in check by the threat that the victim may complain'. Scammed beneficiaries could protest or file a lawsuit, but they *chose* not to.

Three reasons explain the widespread resignation. First, the opportunity costs of complaining are high, so they discourage beneficiaries to initiate legal proceedings. Similar to the 'discouraged worker effect', a 'discouraged complainant' effect is at work here. 53% of the respondents affirmed 'complaining would be too time-consuming or take too much effort' (Niehaus and Sukhtankar, 2013b). For instance, officials' offices where the complaint has to be made are located far from villages (between 3 and 5 hours of transport). Second, a difficult access to information can act as a hurdle in initiating proceedings. Indeed, a body of research on the influence of information in legal empowerment has shown that citizens who are better informed about their rights and policy changes are more likely to stand against corruption and injustice (Ferraz and Finan, 2008). As mentioned above, awareness among NREGA workers is unequal. They sometimes lack knowledge concerning the procedures, the institutions and their rights. Third, individuals can prefer not to complain because they deem it useless. If expectations of obtaining a compensation or a change in public servants' behaviour are low, workers will turn their back on proceedings.

One could legitimately ask why officials do not report undone work in order to extract more rents. There are two reasons. The first one pertains to the fear of being sanctioned. As a matter of fact, to overreport what has been done is safer than to invent job days. Such a trick allows public servants to safely increase their future opportunities of rent extractions while avoiding any suspicious alerts in their units. As Niehaus and Sukhtankar (2013b) put it: 'For example, it may seem safer to claim that it took 150 person-days to dig a hole in the ground when there actually is a hole in the ground that took 50 person-days to dig than when there is no hole at all'. Furthermore, it appears that salaries paid to workers are sometimes higher than those reported. This phenomenon has been confirmed during discussions between the authors and local NGOs. This leads us to the second reason. It can be explained by the 'exit' hypothesis theorised by Hirschmann (1970). The rationale behind the corrupted agents' behaviour is the following. To pursue their rent extracting activities, they need to persuade villagers that the NREGA is attractive. This is what Niehaus and Sukhtankar (2013b) called a ‘golden goose effect’. Yet, villagers have an ‘exit’, the market, that forces officials to offer interesting propositions. Actual NREGA wages thus remain at an equilibrium level, not too low compared to market wages and not too high to keep a reservoir of future rents.

Nevertheless, two encouraging points emerged from Niehaus and Sukhtankar’s study (2013b). First, audit agencies or partners reduce marginal corruption. Gathered in coalitions, local NGOs hamper leakage in the distribution of salaries. They help beneficiaries make their ‘voice’ — in the political sense of ‘claims’ — heard. There is evidence of a negative relationship between the presence of at least an NGO in the village and the marginal rate of corruption. Having an NGO in the village may reduce the money diverted by bureaucrats, thus translating into higher salaries than those in areas without NGOs. The difference between reported salaries and salaries perceived by beneficiaries is less important in villages where NGOs actively monitor the implementation of the programme. They provide advocacy competence to workers and know how to negotiate with public institutions. Second, Niehaus and Sukhtankar reported a positive relationship between wages perceived by workers and the possession of a bank account. Individuals who receive their salaries directly through bank transfers are less affected by marginal rent extractions. Although the evidence found by the authors is tenuous, it is consistent with existing literature. Gordon and Li (2009) showed that financial inclusion and the development of bank infrastructures play a major role in implementing efficient fiscal policies.

To sum up, corruption does not spare the NREGA. The main consequence for beneficiaries is the reduction of their salaries. Officials in charge of implementing the NREGA have many alternatives to extract rents. An encouraging finding is that monitoring through independent actors (NGOs) seems to reduce the magnitude of the phenomenon and encourages villagers to claim their rights. As Misra (2019) and Ravallion et al. (2015) reported, a better governance at the local level is one of the key improvements to make. This requires efforts to set up a new monitoring system.

B/The Lack of Policy Monitoring

Many flaws can comprise the success of a public policy. That is why authorities set up a monitoring system to keep watch on the development of detrimental alterations during the implementation. Monitoring procedures are part of the dynamic process of surveilling the application of a policy to ensure the best performance possible. Without that, a policy could fall into many traps: corruption, path dependence or incorrect targeting. Part B presents the effects of a bad monitoring system (i). Then, it seeks to underline one of the consequences — the collusion between public officials and private actors — that undermines the NREGA's effects (ii).

i/The Effects of a Bad Monitoring System

The OECD affirmed 'policy monitoring and evaluation has a critical role to play in effectively design, implement and deliver public policies and services. Ensuring that policy making is informed by sound evidence on what works is essential to achieve key long-term objectives'. The aim of policy monitoring is to assess whether or not a policy is on the right lines by providing a feedback to policymakers about the successes and failures observed during the implementation of a policy. Monitoring is supposed to allow public authorities to notice imperfections and, in turn, adjust the way the policy is implemented. International organisations consider monitoring as a crucial tool in the fight against corruption. The participation of citizens in the process is regarded as mandatory to increase transparency.

Policy monitoring can be defined as the measure of outputs generated by a policy. As explained by Waterman and Wood (1993), 'policymakers monitor the activities of their bureaucratic agents in an attempt to offset the information asymmetry problem'. The implementation of a public policy can be analysed through the principal/ agent model of the agency theory. Public servants, in charge of the daily execution at the beneficiaries' level, have more information than their superiors. Hence, without monitoring, agents could deceive their bosses. Waterman and Wood (1993) identified four components of a well-designed monitoring system. First, rulers need to incorporate in their guidelines qualitative evidence already documented in existing literature. Second, data collection and management infrastructures must be put in place in order to establish a link between the policy's rollout and observed changes. The next step is the production of statistics, i.e., the identification of channels of impact and causal relationships between variables. Finally, the last stage is to draw conclusions. Once policymakers have identified flaws in the policy, they must set up a response. Policy monitoring is not a one-time evaluation. It implies repetition over time so the rulers are able to modify the framework and the guidelines to obtain better results.

An online Management Information System (MIS) was put in place at the beginning of the implementation. The initiative was praised as a step towards transparency and comprehensive data collection. As Aggarwal (2017) explained: '[MIS] contains details of workers registered with the programme, works sanctioned for implementation, payments made and a wealth of other information. The MIS also provides a variety of useful analyses, such as the participation of various groups in the workforce, the average number of days worked by households and the composition of works implemented in a given financial year. Data is available for all the states and union territories, disaggregated at the state, district, block and gram panchayat level'. The Central government aimed to build a centralised system managed by the Ministry of Rural Development. From 2005 to 2011, paper muster rolls were used to record information. In 2011, they were replaced by electronic muster rolls. These electronic muster rolls are edited by the Ministry of Rural Development, printed, completed with the workers' information, and entered online. The online form prevents officials from adding written complements. Collecting information for the filling of the forms is usually GP's responsibility, but it can be done by the block office or the district. In 2016, a 'geotagging' imperative was set up. Functionaries at the GP level have to take a photograph of every project completed by NREGA workers and upload it on an online database. The objective is to keep records of the number of projects completed in order to compare it to what has been reported by officials.

The electronic revolution initiated in 2011 has not proved foolproof. The very first issue occurred in places where there is an important lack of technological equipment. Aggarwal (2017) reported that the filling of electronic muster rolls is obstructed by poor electricity distribution, few available computers and poor Internet network. When the online form is not available on the worksite, beneficiaries are forced to wait or start working without proper attendance. In that case, managers keep an informal attendance sheet that will later be entered on the website. As the level of formality is low, errors happen regularly and lead to a loss of income for workers.

Concerning the payment of salaries, until 2013, funds were allocated to GPs' bank account; then GPs had to distribute money to workers. In 2013, an electronic Fund Management System (FMS) changed the procedure. A central bank is now in charge of versing salaries directly to beneficiaries' savings account. Aggarwal (2017) underlined that such a transfer of responsibility could have been at the origin of an indifference among GPs, whose role of distributing funds constituted a 'prestigious' function. The weaker local supervision may have diminished GPs disposition to fully exploit the potentialities of the programme.

The online system allows functionaries to easily distort data. Aggarwal (2017) pointed out the easiness of data alteration in the software. Functionaries frequently create fake workers' profiles and associate them with a muster-roll in order to boost the statistics of employment generated by the NREGA. To avoid suspicion, they also delete job cards from the database, thus making fraud tracking by linking bank account numbers with workers' files impossible. Moreover, the constantly growing centralisation impedes regional states and local authorities to adjust policy monitoring to local needs. As explained by Aggarwal (2017), all the villages use the same unique format of forms with similar questions for everybody. This prevents localities from generating specific forms that could allow them to collect supplementary data, more representative of the targeted groups. Guidelines force local administrations to use documents written in English, although villagers and even GP members do not necessarily speak nor understand the language.

Irregularities in the circulation of information have been reported. For instance, beneficiaries can be removed from the database, thus becoming unable to obtain a NREGA job, without being notified of the change. Such anomalies disconnect the statistics from the real demand. A fundamental principle in public policies is adapting a scheme to the selected area. As seen before, this concept was supposed to be the core of the NREGA. However, in 2016, the State government chose an opposite direction and established state-wise guidelines in the creation of assets, even though villages have different needs due to their geographical characteristics. Furthermore, the government sometimes makes decisions that are contradictory to what data says. For instance, Aggarwal (2017) reported that in December 2016, the Ministry of Rural Development refused to record applications for more than 100 days of work for a household, although completing 100 days of work is exceptional. The justification given by authorities was that every household's demand was systematically fulfilled. Aggarwal (2017) also pointed out incoherences in the wage compensation procedure. According to the guidelines, when a worker has not received its salary after 15 days, he has the right to claim a compensation. The compensation is calculated on the number of days between the end date entered in the online muster-roll and the authorisation date entered in the fund transfer order. In reality, beneficiaries rarely receive their compensation the same day the fund transfer order is approved.

Another example concerns public meetings. Public meetings are a fundamental part of the sound implementation of the NREGA. The organisation of public reunions to spread information among villagers is one of GP's duties. As Dutta et al. (2014) reported, this system is far from meeting quality standards. Taking the example of Bihar, where 60% of households claimed that no meeting had taken place during the last year or that they were not aware of it, the authors emphasised the fact that monitoring procedures were not strictly respected. This clearly jeopardises the chance of the NREGA to extensively reach rural groups in need of support from public authorities.

Another aberration is the absence of an emergency fund to help villages hit by climate shocks. Chopra (2014) explained that regional governments are constrained by the budget allocation versed by the Central State. The budget allocated to regional states takes into account the amount of funds versed the previous year and the annual state's expenditures. The money left at the end of a fiscal year is deducted to the next budget allocation. This requires an efficient planning from policymakers, especially accurate demand previsions, and goes against unexpected increases in expenditures due to external shocks. For instance, during the 2016 drought that impacted a third of the country, additional materials could not be bought to stimulate the construction of assets, and, in the end, employment.

To sum up, it is noteworthy to look at how the NREGA is monitored to understand why it is not fully efficient. The monitoring system in vigour does not allow public authorities to adjust the policy to what is needed at the local level. Data is distorted so it is hard to identify possibilities of change and amelioration. Policymakers thus must set up transparent monitoring processes that act as deterrents to functionaries' flippancy. Partnerships with local NGOs and public meetings, as planned by the guidelines, would be of great help towards success.

ii/Collusion Between Public Officials and Private Actors

Between its Independence in 1947 and 2014, when Modi came to power, India knew a long period of socialism with a public sector substantially regulated by bureaucratic red tape. The economy was controlled by a powerful state. However, as Jaffrelot (2018) underlined, the links between rulers and businessmen have been firmly established ever since the emergence of an independent India. This led Jaffrelot to describe India's system as a 'crony capitalism'. He defined 'crony capitalism' as a political and economic configuration marked by the ‘appropriation of a part of the political power by businessmen who maintain particularly friendly relations with politicians’. The phenomenon increased during Modi’s presidency (Jaffrelot, 2018). In the case of the NREGA, the notion of ‘crony capitalism’ can be used to apprehend the influence private actors exert on politicians. Powerful economic actors can put pressure on public servants to slow down the programme. As pointed out by the World Bank (2017), public policies must take into account imbalances in bargaining power to minimise the effects of elites’ overrepresentation. Moreover, public servants are individuals belonging to basic social groups (their family, their caste, etc.). They can show preferences towards acquaintances or superior members of the groups they belong to, thereby revealing the influence of the local hierarchy.

To give the right to obtain a job was a milestone in the fight against poverty. This distinctive characteristic of the NREGA was expected to keep clientelism at bay. Every applicant being equal, each can file a lawsuit on the basis of legal texts to obtain a job, so public servants cannot favour anyone. This led Maiorano, Das and Masiero (2018) to describe the programme as a ‘post-clientelistic’ policy. Clientelism has been defined by Hicken (2011): ‘there is no generally accepted definition, but many definitions highlight the following as key elements of clientelist relationships: dyadic relationships, contingency, hierarchy, and iteration’. In other words, it refers to a situation when two individuals, one being superior to the other, exchange goods or services in order for each to gain something. As Maiorano, Das and Masiero (2018) explained, the relationship between the ‘patron’ and the ‘client’ is not separated from its environment. Therefore, pressure from external groups exist and have an effect over administrative decisions. Let us take the example of big farmers.

Big farmers have historically been dependent on ‘a cheap, compliant labour force’ (Jakimow, 2014). Das and Maoriano (2019) reported many testimonies of public servants affirming the influence of large landowners. As shown above, the introduction of a minimum wage along with the mandatory provision of public jobs threaten their business by causing an increase in salaries. Large landowners now face difficulties to find labourers in time and have to handle rising incomes claims, which gives them at least two reasons to stand against the scheme. As Li (2019) showed, the influence of landlords on the implementation of the NREGA through lobbying takes two forms. First, landlords can intervene *ex ante*, before the scheme is designed, by lobbying for lower budgets allocated to the NREGA. Since GPs and low level governmental agencies play a decisive role in budget allocation, landlords can more easily influence them than higher agencies. Second, landowners can hamper the implementation *ex post*. They can delay procedures and put pressure on local officials. A blatant example is the 'crop holiday' movement that occurred in 2011, in Andra Pradesh. Farmers went on strike to protest against increasing agricultural salaries threatening their revenues.

Another factor influencing the implementation of the programme is the domination of upper castes. Through the caste system, individuals from a high rank exert pressure on administrative agencies and control the political life. Adhikari and Bhatia (2010) found evidence of upper caste villagers swindling money from the antipoverty programme. In Kakaram, a district of Allahabad, muster rolls contained the name of several upper caste men, although none of them had ever been seen working on a NREGA site. Castes overlap the large landowners issue. Although large landowners account for a tiny share of India's population — less than 5% according the last census — they form what Grossman and Helpman (2001) call a 'special interest' category of citizens. Their political interests are specific and differ from any of other groups. Big landowners usually come from an upper-caste background and agricultural workers from low-caste families. Thus, the former consider the latter as inferior subjects available for low-paid, undesirable work.

Taking the exemple of Andra Pradesh, Maiorano (2014) showed that politicians can also be at the origin of dishonest manoeuvres. Between 2006 and 2012, local rulers used the 60/40 budget rule to help acquaintances. The stratagem was to promote acquaintances as suppliers of equipment. As explained by Veeraraghavan (2017, p. 206), decisions concerning the activities to be executed by workers are taken at the *mandal* (sub-district) level. These decisions also determine the equipment-job ratio, as they determine how much material is needed. Members of legislative assemblies can thus put pressure on *mandal* bureacurats, since they are the 'only political authority supervising bureaucrats at the *mandal* level' (Das and Maiorano, 2019). This echoes the findings of Gulzar and Pasquale (2017) who showed that the influence of politicians upon bureaucrats is stronger when the latter are supervised by one politician. Furthermore, the equipment ratio was calculated at the district level. Hence, statistics could be manipulated at the village level to reach an overall ratio of 40%**.** In 2012, the State Minister of Andra Pradesh changed the system and chose an online, centralised equipment procurement procedure to put an end to the trick.

Interferences from political parties can influence the way the NREGA is implemented. Das and Maiorano (2019) reported informal alliances between the ruling party and contractors at the local level. Politicians, who have a strong influence on bureaucrats controlling the implementation of the programme, maintain friendly relations with industrial firms. In order to secure donations and support from the business sector, members of legislative assemblies help their contractors get contracts to supply equipment to the NREGA worksites. The ruling party puts pressure on NREGA bureaucrats to compress expenditures on jobs, so the equipment section receives a greater part of the fundings.

The lack of policy monitoring translates into informal arrangements between public servants and private actors. Upper-caste large landowners have a great influence on officials and easily block the efficient long-term implementation of the NREGA. Breaches in the dexision-makin process and the monitoring channels cause distortions to happen.

Conclusion

Jake Sullivan, the current US National Security Advisor, once commented on public policy during a speech he delivered at the University of Minnesota. Here are his words: ‘Public policy is a study in imperfection. It involves imperfect people, with imperfect information, facing deeply imperfect choices — so it’s not surprising that they’re getting imperfect results’. At the end of this dissertation, these bitter words sound as a sarcastic summary of the NREGA.

This dissertation sought to give a global review of the NREGA. It aimed to present the main results concerning the effects and the flaws of the programme. In the end, one can cunningly compare the NREGA with a giant with argile feet. Indeed, two conclusions emerge from this literature review. First, it is clear that the NREGA led to an income increase and the socio-economic empowerment of its beneficiaries. As its philosophy planned, it is advantageous to marginalised groups (women, SCs and STs), many of them suffering from extreme inequality. The second finding is less rejoicing: the NREGA is deeply flawed. Two phenomena undermine the effects of the programme and make its evaluation arduous: failures in the administrative structure and methodological issues. Chapter 2 showed how difficult it was for researchers to collect sound data and analyse this national programme implemented in unequally endowed areas. It also revealed that corruption and a poor monitoring can annihilate the benefits brought by the 100 days of paid work.

Chapter 1 showed that the programme was successful in having positive impacts on villagers. The NREGA did lead to an increase in salaries, especially amid marginalised villagers, who are the greatest beneficiaries of the policy. The NREGA is successful in reaching women and low-caste labourers, two groups usually at the margin of formal work. To have the guarantee of obtaining a job is a relief for rural workers, who are able to make more optimistic previsions about the future. This translates into riskier behaviours among farmers who grow more remunerative crops. The implementation of an antipoverty programme targeting poor rural individuals involves vigorous participation by local authorities. Therefore, the NREGA contributes to the decentralisation process. By nature, the programme promotes human and economic development backed by public goods. This takes the form of public infrastructures, such as dams or field bunding, contributing to environmental preservation and providing villagers with new assets useful in their daily social and economic activities. In a nutshell, the NREGA improves various economic and social elements of villagers' environment.

However, Chapter 1 also revealed some failures of the policy. It underlined indirect negative effects. Some of them were foreseeable. Workfare programmes produce adverse effects that have long been documented by researchers. Some others were not, being specific to the Indian case. These damaging effects counterbalance the benefits brought by public employment. For instance, like other antipoverty schemes, the NREGA led to a drop in schooling rate.

Besides the negative effects it has on villagers, the NREGA's impact is distorted by structural malfunctions. This is what Chapter 2 underlined. Corruption and the lack of monitoring hamper the optimal implementation of the programme. Public officials swindle money throughout the process. Public servants, in order to extract rents, falsify statistics they report in official files. Dishonesty amid officials in charge of the scheme has two detrimental consequences. To deal with a corrupted agent is costly for beneficiaries, who go through a loss of money to get a NREGA job. Second, it prevents policymaker and researchers from working with sound data. Research on the NREGA is thus biased. Chapter 2 showed that data collection and analysis are problematic in India due to a lack of adequate infrastructures and evidence of wrongdoings from the authorities.

Chapter 2 also reported other methodological issues faced by researchers. As mentioned earlier, one of them is the availability of sound data. Another one is the possibility of drawing comparisons. The implementation takes place all over India in areas with unequal resources. This means villages do not implement the NREGA in the same way and with the same quality. Hence, it is difficult to assess the real effects of the policy due to flaws existing and not linked to the NREGA. As Sukhtankar (2017) put it, researchers study ‘the effects of varying implementation quality’. A comforting result is that the NREGA is much more efficient in states with large administrative resources, which shows that a key element for its success is a sound bureaucracy. This should lead the Central and regional States to focus on enhancing public governance and funding.

By pointing out positive and detrimental effects of the NREGA, this dissertation provides ideas of what should be investigated in future studies to produce a renewed and more precise picture of the programme’s consequences. This conclusion gives the occasion of introducing some of them. Four themes stick out, that have been relatively neglected or whose importance have been underestimated by researchers until now.

The first theme is gender. As mentioned in Chapter 1, to say that the NREGA empowers women is not sufficient. The programme did lead to an increase of their earnings and a redistribution of power within the household. These positive effects are well-documented. Thus, research should shed a new light on negative impacts that could change the perception of policymakers on the NREGA. Even if women get access to formal jobs and higher salaries, gender inequalities still persist. They bear the consequences of administrative rationing and corruption more heavily than men. The working conditions are not adapted to their physical abilities. Representing the larger proportion of the NREGA’s workforce, some denounce a ‘povertisation’ of women. Putting gender back into the analysis would force rulers and researchers to look at the NREGA’s worksites and guidelines as gender-biased structures. By doing this, the welfare of the most numerous group of NREGA workers could be improved.

Mentioning the welfare of the workers leads to the second theme. On this topic, Alik-Lagrange and Ravallion (2015) are pioneers. The physical intensity of the works asked to labourers requires more attention in the evaluation of the policy. The NREGA induces toiling for long hours under the sun. Workers mostly accomplish unqualified physical work. This has detrimental consequences on workers' bodies and wellbeing. Indeed, heavy manual work is associated with health issues, fatigue and psychological lassitude. Researchers and policymakers should thus consider this variable a key element in their assessment. As Alik-Lagrange and Ravallion (2015) underlined, when the costs of the demeaning nature of NREGA jobs are translated into monetary gains, the programme is equivalent to a simple cash transfer in terms of poverty reduction. To be truly beneficial, the programme has to generate a surplus of positive effects via the construction of durable public goods. It is relevant to recommend to public officials to increase NREGA salaries or reduce the length of the workday. Moreover, efforts could be focused on the building of high value-added, sustainable and durable public infrastructures.

A third factor rulers have paid little attention to is the impact of the policy on education. One of the consequences of workfare programme is the absence of the parents from the home during the day. This is a major change compared to the previous familial organisation induced by informal or unpaid domestic work. Here, the determining variable is the participation rate of women. This has to do with gender inequalities and social norms that give women the responsibly of the household. When they substitute public formal paid work for unpaid domestic labour, their time cannot be completely dedicated to the household. Their husband generally working outside the home, nobody looks after the children. This leads to a drop in schooling rates and parental investments in their children's human capital. Therefore, the already alarming education inequalities end up reinforced. This finding confirms what has already been documented. Policymakers have started to act by promoting the convergence of several antipoverty programmes. But this is not sufficient because coordination is costly and requires an efficient bureaucratic structure, often absent in rural India. NREGA's guidelines contain elements concerning the building of crèches or child facilities to help households keep their children on the path towards education. But too often they are not available on the worksites.

The final topic that is significant for the improvement of the NREGA is pollution. As for the comment on beneficiaries's wellbeing, this theme has not been an object of investigations. It was pioneered by Behrer (2019). This a noteworthy subject for two reasons. First, if the NREGA leads to an increase in pollution, the programme would fail to achieve its sustainable development goals. Second, it would add to the existing rural agriculture-induced pollution burden. Here again, the redefinition of guidelines and policy convergence seem to be appropriate solutions. If the benefits engendered by the NREGA, that is, higher incomes, a reduced risk-aversion and higher productivity eventually cause an increase in pollution it is through the production of crop residues. In rural India, farmers burn crop residues before sowing the next crops. It is the only choice they have due to the lack of waste management infrastructures. Therefore, it would be relevant to use the NREGA to resolve the issue. For instance, NREGA workers could easily collect crop residues on the fields. It would allow farmers to save money and time. It would also put the programme at the centerstage of a cooperation between public authorities and farmers. This could spread information about the NREGA and reduce tensions between landowners and rulers.

Many other comments could have been made on the NREGA. Other dimensions of the policy deserve further investigation. This dissertation aimed to focus on the features that are fundamental for its success. Much has yet to be said on the politically interested use of the NREGA by politicians, the incorporation of new technologies in the monitoring system or the consequences of the scheme on inflation in villages.

This dissertation supports the NREGA, although imperfect, in the controversy around the scheme. In the debate going on amid Indian politicians about the relevance of a nationwide workfare programme, this work shows how and why the NREGA is a better choice than a cash-transfer initiative. If not a better choice, at least the NREGA has considerable advantages. The detractors of the NREGA argue that cash-transfer is easier, cheaper and less subject to corruption and bureaucratic flaws. However, as seen in Chapter 2, online monitoring systems require a suitable equipment that is absent in remote villages. The greatest advantage of the NREGA, compared to cash-transfers, is his broader impact on villagers' life. By encouraging women to take up formal jobs, it fights gender stereotypes; it provides rural populations with an employment guarantee during hard times; it plays a role in the building and renovation of public infrastructures; it promotes sustainability as a fundamental criterion of public policies.

This dissertation was written between September 2020 and May 2021. During this period, the second wave of the Covid-19 pandemic stroke. The months of April and May 2021 were catastrophic for India in terms of contaminations and deaths. At the time this thesis was written, it was known that the consequences of the pandemic would be disastrous for the poor but the extent remained uncertain. India was expected to be harshly hit. Sumner, Hoy and Ortiz-Juarez (2020) predicted the first increase in global poverty since the 1990s. Covid-19 could amplify poverty in rural India. In this turmoil, 'the demand for [NREGA] jobs under the Act has increased by 86%' (Jaffrelot and Thakker, 2020). Citizens turned to the NREGA to get a livelihood. Once again, it proves its usefulness as an 'insurance net'. However, this success in hard times should not distract public authorities from the necessity of launching structural reforms and stop neglecting the rural economy.

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