Some Considerations on Basic Income Policy in India and Its Cost

A Dissertation Submitted to the University of Hyderabad in Partial Fulfillment of the Requirements for the Award of

MASTER OF PHILOSOPHY

IN

ECONOMICS

BY

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JUNE 2019

DECLARATION

I, **SURAJ PADHAN** bearing Regd. No-**17 SEHL 17**, hereby declare that the dissertation entitled **"Some Considertions on Basic Income Policy in India and Its Cost"** carried out under the supervision of **Prof. R. V. Ramanamurthy**, School of Economics, for the award of Master of Philosophy in Economics from University of Hyderabad, is an original work of mine and to the best of my knowledge, no part of this dissertation has been submitted for the award of any research degree or diploma at any university.

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I declare to the best of my knowledge that no part of the thesis was earlier submitted for the award of a research degree of any university or institute.

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ACKNOWLEDGEMENT

I would like to extend my deepest gratitude to my supervisor Prof. R. V. Ramanamurthy whose supervision and valuable suggestions shaped the research in a better form and led to the successful completion of the dissertation.

I would like to thank all the faculty and staff of School of Economics who were always kind and helpful. Assistance provided by the staff of the libraries of University of Hyderabad is greatly appreciated. I would like to thank the University of Hyderabad for the financial assistance by providing NON-NET fellowship for three semesters

A heartfelt thanking goes to all the seniors and friends for their intellectual and moral support throughout the research.

I also thank my parents for their emotional and financial support. I would like to thank my siblings for their continuous encouragement and unconditional love.

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List of Abbreviations

AOGA- Alaska Oil and Gas Association

APFC- Alaska Permanent Fund Corporation

BIEN- Basic Income Earth Network

BIG- Basic Income Grant

BPL- Below Poverty Line

CMIE- Center for Monitoring Indian Economy

DBT- Direct Benefit Transfer

DCT- Direct Cash Transfer

ELCRN- The Evangelical Lutharen Church in the Republic of Namibia

FES- Final Evaluation Survey

GDP- Gross Domestic Product

IFPRI- International Food Policy and Research Institute

JAM- Jandhan Account, Mobile Number and Aadhar Card

MGNREGS- Mahatma Gandhi National Rural Employment Guarantee Scheme

MMRP- Modified Mixed Reference Period

MRP- Mixed Reference Period

NCRB- National Crime Record Bureau

NIT- Negative Income Tax

NPNSPE- National Programme of Nutritional Support to Primary Education

NSS- National Sample Survey

NSSO- National Sample Survey Organization

NYAY- Nyuntam Aay Yojana

PDS- Public Distribution System

PGRFM- Guaranteed Minimum Family Income Program

PLB- Poverty Line Basket

PSDB- Brazilian Social Democratic Party

RBI- Reserve Bank of India

RCT- Randomized Control Trial

SEWA- Self Employed Women's Association

TUBI- Targeted Universal Basic Income

UBI- Universal Basic Income

UDHR- Universal Declaration of Human Right

UI- Unemployment Insurance

UNICEF- United Nations International Children's Emergency Fund

URP-Unified Reference Period

UT- Union Territory

WHO- World Health Organization

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Chapter 1

Introduction

The discourse on Basic Income through direct cash transfer is rapidly gaining popularity and is in fact becoming some sort of movement. Basic income means providing cash benefit for a minimum but dissent living. The idea of cash transfer, providing individuals with cash directly, is not new globally as all of the countries have some sort of cash transfer policies directed at various objectives. The motivation for such a policy in a developed country might lie in line with automation and associated job loss, emergence of artificial intelligence whereas for developing countries the case for such a policy may arise from prevalence of poverty and inequality. For example, in the US there is unemployment allowance provided by "The U.S. Department of Labor's Unemployment Insurance (UI)". Individuals who are not employed or lost their jobs without their own mistakes and also meet certain other criterion are eligible for the benefit (Unemployment Insurance). In India also there are many cash transfer schemes like Indira Gandhi National Old Age Pension Scheme, the Indira Gandhi National Widow Pension Scheme, Indira Gandhi National Disability Pension Scheme to empower the dependent population to sustain their living. Apart from this countries have been experimenting direct cash transfer instead of in-kind welfare program for better administration and efficiency in targeting and allocation of resources. For example, three Indian union territories Dadra and Nagar Haveli, Puducherry, Chandigarh had replaced the highest coverage welfare program PDS with direct cash benefit (Direct Benefits Transfer in Food Results from one year of Process Monitoring, 2017, p. 4).

An extensive case for such a cash transfer program (Universal Basic Income) was presented in Economic Survey 2017 in India whereby everyone would be given a specific amount of cash and that would be an appropriate policy towards widespread poverty alleviation in India because despite policy focus is mainly on poverty reduction, it's still extensive (Economic Survey 2016-17, 2017).

Perspectives on Basic Income

Basic income has gathered a wide variety of perspectives around the world. Supporters of basic income justify basic income as a matter of right to a compensation for automation of employment. One of most prominent advocates of basic income, Philippe Van Parijs wrote Real freedom for all and claimed for highest sustainable basic income for all. He defines real freedom as freedom to do anything as one wish and it includes security, self-ownership and opportunity. He also argues for a free society where even the least advantaged person receives the greatest opportunity and he believes basic income can make it happen. Van Parijs in his another book 'Arguing for Basic Income' provides four justifications for basic income; freedom, equality, community, and economic efficiency. He goes further that basic income is able to eliminate poverty (Widerquist, 2001) .When we consider UBI as a mechanism to fight poverty, it means UBI raises the income of the poor so that they could be able to buy the basic necessities of living like food, clothes, education etc. and this conception of UBI has also been suggested by other supporters. Martin Luther King Jr. in his book 'Where do we go from here' writes that poverty is caused by multidimensional factors like lack of education, restricted job opportunity etc and the approach to target these factors one by one has failed to reduce poverty which gives space for guaranteed basic income. He writes "I am now convinced that the simplest approach will prove to be the most effective—the solution to poverty is to abolish it directly by a now widely

discussed measure: the guaranteed income" (Jr, 2010, p. 171). He goes further that basic income is desirable for economic security and writes "A host of positive psychological changes inevitably will result from widespread economic security. The dignity of the individual will flourish when the decisions concerning his life are in his own hands, when he has the assurance that his income is stable and certain, and when he knows that he has the means to seek self-improvement" (Jr, 2010, p. 173). "The U.B.I. is often framed as a tool for fighting poverty, but it would have other important benefits. By providing an income cushion, it would increase workers' bargaining power, potentially driving up wages. It would make it easier for people to take risks with their job choices, and to invest in education" (Surowiecki, 2016). Similar to the freedom argument of UBI, Carole Pateman justify for basic income as "First, because of the part that basic income could play in furthering democratization, that is, the creation of a more democratic society in which individual freedom and citizenship are of equal worth for everyone. The second, and closely related, reason is because of its potential in advancing women's freedom" (Pateman, Democratizing Citizenship:Some Advantages of a Basic Income, 2004) .

An extensive case for Basic income can be found in the writings of Prof Guy Standing. His ideas for basic income mainly focus on poverty reduction and reduction of economic insecurity what he calls as precarity. According to him a regular flow of income would curb poverty trap and reduce precarity trap. He cites the example of Britain where the marginal tax rate of shifting from state benefit to a low-paying job is 80% or more. Such welfare policy inherently stuck the poor in poverty trap. When income of the individual rises to certain predetermined level, the welfare benefit is cut off from him. This has an adverse effect on incentive to work more. Basic income being unconditional on income or employment status would remove this poverty trap as it is independent of income or employment status. Basic income also enables them to live with

low-wage employment as it works as a top up to the earned money. Basic income also enable them to undertake risky economic activities as it backs them as income security (Standing, 2017). He also defends basic income from the view point of employment insecurity.

Another case for the need of a basic income can be found in Guy Standing another work 'The Precariate'. He has classified the population into "elite; the globally rich people, salariate; people in full-time employment, profician; consists of professional and technician, working class; manual employee and finally precariat; a group of unemployed and a detached group of socially ill misfits living off the dregs of society" (Standing, 2016, pp. 7-8). He has mainly focused on the last group of people 'precariate' throughout the book. The term precariate has different meaning from country to country but all of them in a way go in the same direction i.e economic insecurity. "In Italy, the precariato has been taken to mean more than just people doing casual labour and with low incomes, implying a precarious existence as a normal state of living. In Germany, the term has been used to describe not only temporary workers but also the jobless who have no hope of social integration" (Standing, 2016, p. 9). He has outlined precariousness in seven forms of labor-related security i.e labor market security, employment security, job security, work security, skill reproduction security, income security and lastly representation security (Standing, 2016, p. 10). People who lack any of these forms of security enter into the precariate group and these numbers are growing in every country. As an answer to this he proposes everyone should be provided with a modest monthly payment. This payment would be provided in cash which will be unconditional to use which promote free choice of the recipient. According to him "Poverty is about unfreedom as well as about not having enough to eat, not enough clothing and an inadequate place to live. Imposing conditions, whether behavioural or in terms of what the recipient is permitted to buy, is an act of unfreedom" (Standing, 2016, p. 172).

Philippe Van Parijs also puts the argument “that a basic income would help poor people out of the unemployment trap, that its introduction would redistribute income quite massively from men to women, that it would improve the quality of the worst jobs, that it would support farmers' incomes without distorting agricultural prices, and that it would enhance the flexibility of the labor market” (Parijs P. V., Why Surfers Should be Fed: The Liberal Case for an Unconditional Basic Income, pp. 102-103). These arguments emphasize the positive role of basic income security on employment. This can also be found in the Rawlsian argument for unconditional basic income where he says unconditional basic income confers the weakest section of the society with more bargaining power in labor market than any other conditional transfers.

Parijs also conceptualizes the theory of justice in Basic Income by putting “I shall argue that a defensible liberal theory of justice, that is, one that is truly committed to an equal concern for all and to nondiscrimination among conceptions of the good life, does justify, under appropriate factual conditions, a substantial unconditional basic income” (Parijs P. V., Why Surfers Should be Fed: The Liberal Case for an Unconditional Basic Income, p. 102). Even in Rawl’s Theory of Justice, a case for basic income is defendable. According to the Difference Principle, for justice to be served the social policy should aim at improving the standard of the least advantaged group in the region. So in this regard basic income for all seems to be a desirable welfare policy that can improve the position of each and every individual of the region (Rawls, 2009). A similar conception to this has been put by Guy Standing where he coined ‘Security Difference Principle’. This principle implies “a social policy or institutional change should be regarded as socially just only if it improves the security of the most insecure groups in society” (Standing, 2017). Thus these arguments infer that basic income has the ability to render social justice to everyone.

Philosophy of Basic Income

The idea of basic income to every citizen of a country has begun with the Enlightenment in the Western world. The very idea of a means to subsist for everybody to be provided a minimum income floor for a decent living can be traced back to 15th century when Thomas More in his book "Utopia" claimed for a minimum income to everybody. But in a stringent form, basic income as a matter of right emerged in 18th century by political philosopher Thomas Paine. Thomas More suggested basic income to fight thievery, according to him;

> "No penalty on earth will stop people from stealing, if it is their only way of getting food. It would be far more to the point to provide everyone with some means of livelihood" (Standing, 2017).

Though the concept of basic income could not get enough attention in the 15th century, it emerged again in the 18th century with new fundamental for basic income across the world under variety of term used for it, such as 'guaranteed minimum', 'state bonus', 'freedom grant', 'basic income grant' 'social dividend', 'demogrant' or 'citizen's income' (Standing, 2017).

King and Marangos (2006) argue that the idea of social assistance can be traced back to 17th century revolutionary philosopher, social activist Thomas Paine. He wrote about "The Right of Man" and claimed social assistance as a matter of right rather than charity (p. 59). This is the emergence of basic income as a human right approach. His ideas mainly focused on economic justice. By economic justice he means an equal distribution of income and wealth. He was also concerned with the legitimacy of ownership of private property. In his idea there was no place of private ownership of property as everything belongs to all equally.

In the book "Agrarian Justice" Paine discussed about poverty as a result of contemporary civilized state, a society with private property and high productivity, which is opposite to nature state where there is no private property and productivity is lower. So according to him in a nature state there is actually no poverty and hence this poverty in civilized state has to be eliminated. In this case his basic argument follows as -in a state of nature the earth belong to the community, none's private property, everyone has equal entitlement to it and hence nobody would be left out from enjoying it. Paine thus entails everybody should be equally benefitted in both nature state and civilized state . He then acknowledges the improvement in land as a result of labor cultivation and a basis for private property, which according to him is the value of improvement only rather than the land. So he goes further that every landowner is liable to pay ground rent to the community and this resource would be available to fund income support plan (p. 61).

The argument Spence proposed for a basic income stems from communal ownership of land. Spence in his work "The Marine Republic" (1814) put down a case for basic income. Land is, in his perspective, a public property for which rent is due to the society. This rent is first used to pay for taxes, tolls and other expenses. The rest of the money have to be equally distributed among all the settled resident. So in Spence plan people are more incentivized to encourage economic activities as the rent they receive increase from the improvement.

Economists have used the idea of basic income as a means to reduce economic insecurity and thereby reducing poverty and inequality. In the 19th century the idea of basic income comes from the prevalence of market system. Freidrich Hayak in his book “Law, Legislation and Liberty” inserted the proposition of a minimum guaranteed income as a means of libertarian principle. According to him

> "The assurance of a certain minimum income for everyone, or a sort of floor below which nobody need fall even when he is unable to provide for himself, appears not only to be wholly legitimate protection against a risk common to all, but a necessary part of the Great Society in which the individual no longer has specific claims on the members of the particular small group into which he was born" (Hayek, 2012, p. 55) .

Milton Friedman in his book "Capitalism and Freedom" argued for a free income for the poor household in the form of Negative Income Tax (NIT) (Friedman, 2009). As opposed to a standard tax system, NIT means people whose income is low would receive money back from the government. It is nothing but the difference between the income they earn and an income cutoff after which they pay tax to the government. For example, if the income cutoff is at Rs.20000 and the NIT percentage is set at 50 %, someone who made Rs.10,000 would receive Rs.5000 from the government itself. Although it is different from an actual Universal Basic Income, it works as a cash transfer to reduce poverty. This system would identify the beneficiaries more efficiently and effectively as the needy receive more assistance than others. According to Friedman, NIT is an improvement over traditional welfare system which is provided in kind due to bureaucratic and administrative inefficiencies. It also renders individual freedom over the use of the money unlike in-kind benefits.

Universal Declaration of Human Right (UDHR, 1948) is a significant development in the context of income security of the citizens of a country through providing a minimum basic income for survival. Many articles in UDHR imply for a basic income from the government.

> "Article 3: Everyone has the right to life, liberty and security of person. Article 25: Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control" (What is origin of this idea, the history of basic income?).

Hillary Clinton in her 2016 presidential campaign in the US, pondered a UBI modeled in line with the Alaska Permanent Fund. Former President of the US Barack Obama considered a UBI as the solution to advancing artificial intelligence, job loss due to shifting away from labor-intensive technology. Similarly in France, the presidential candidate Benoit Hamon appraised a UBI in his electoral program in 2017. In Hawaii also House Concurrent Resolution 89 was passed in 2017 which construct a Basic Economic Security Working Group that focus on providing financial security to the families.

Received views in India

The argument for basic income appeared in Indian scenario in about 2012, when Guy Standing, in his Keynote address to Indian Labour Economis Society Conference in Varanasi, strongly advocated a basic income policy in the form of cash transfer in India very strongly, for all its woes with kind transfers based welfare policy in terms of inclusion and exclusion errors and inability of precariat to utilize the welfare. The popular NGO, Self-Employed Womens Association, of Madhya Pradesh wing implemented a pilot program supported by UNISEF. This program was the first of this kind that provided universal and unconditional income to the pilot villages. The details about the program and it's impacts on lives of the people have been

discussed in the next chapter. In the year 2016 the debate for basic income reappeared in India when Economic Survey 2016-17 opened up the space for implementing a basic income scheme in India. There are four major arguments for rolling out an UBI as presented in the Economic Survey

> "one, by entitling everyone with ownership over certain share of country's wealth, it can maximize the social justice; two, UBI is less paternalistic than other in-kind welfare programs as it renders full freedom over the use of the benefit and empower them to make their economic decision as they find fit; three, UBI can guarantee a everyone enjoy a basic living even at the time of economic uncertainties like unemployment, natural shocks etc; four, by making use of the JAM (Jan Dhan accounts, Mobile numbers and Aadhar cards) trinity, a UBI would inject administrative efficiency and transparency into a welfare system "riddled with misallocation, leakages and exclusion of the poor" (Economic Survey 2016-17, 2017) .

This cash transfer program has been center point of policy debate around the world as an alternative approach of social security. The Indian National Congress president Rahul Gandhi cited a Guaranted Basic Income if comes to central power.The scheme has been named as NYAY (Nyuntam Aay Yojana). As the term "NYAY" itself a Hindi origin indicates justice, the program aims at rendering economic security and combating poverty through a redistribution of income (NYAY: Decoding Congress's minimum income guarantee for the poor in 5 points, 2019). This dissertation thus makes a detail study of basic income policy.

Research Problem

Now that universal basic income is being discussed as an important policy option, it is imperative on the part of researcher to problematize the issue. This study looks at UBI as an outcome of creation of incomes through regular source of employment in the economy. The economic, technological and developmental factors in the developing countries are worsening unemployment, inequality and deprivation. As such market mechanism has failed to address externalities like invisible labour in informal sector, women's labour, while the case of imbecile, differently enabled citizens, old people, infants and mothers lie with the society and state. Except direct transfers, there are no mechanisms available with market mechanism to deal with this problem. Now, added to that mass unemployment of labour force, with automation, more particularly artificial intelligence, is already a major problem. A basic income transfer is going to be addressing the failure of capitalism, markets and externalities at one go. Basic income is also to be considered as a basic right. A universal basic income will avoid the income and exclusion errors, besides becoming politically expedient in terms of avoiding opposition from the well off.

Once when we accept universal basic income as an acceptable policy, which this study assumes so, the problem would that of finding a suitable level of basic income for the country, estimate the cost of financing and raising the resources for the same. While this certainly forms a massive agenda of research on this issue, this study chooses to do a limited exercise on generating tentative alternative estimates by assuming certain approach to basic income under alternative conditions.

Research Objectives

- The study aims at understanding the philosophical, economic and empirical basis for arguments for UBI.
- The study would make a review of international experience on UBI.
- The study would prepare alternative estimates of budget for UBI.
- The study analyses the need for a state specific basic income model instead of national level model.

Research Methodology

The study is an exploratory in nature, since, Basic Income policy in India has not so far taken of, but a discourse has already begun, which would make it a policy one day. For that there is need to gather intellectual opinion, a discussion on difficulties and possibilities of its conception and delivery. This study undertakes a systematic review of literature on the concept, origin and development, current debates on UBI. As an important exercise and our contribution, this study makes estimates on basic income and the budget required for it based on secondary data on population, households, number of poor and so on. It uses simple statistical tools such as averages. We take NSSO data on households living below poverty line, and apply Rangarajan and Tendulkar definitions of poverty line to show alternative poverty projections. We proceed to estimate alternative budgets for a basic income policy, defined as poverty level of invome, on universal and targeted bases.

Limitation

The study is heuristic and hypothetical in its approach. Therefore, it is neither comprehensive nor has final word on what should constitute Basic Income policy. Indeed, it has taken a very minimalist criterion for such as an idea. This should be considered as the limitation of the study.

Chapters in the Dissertation

Chapter 1 - Introduction

This chapter presents the brief introduction of Basic income. It also captures the perspectives, origin and recent development of basic income as a policy. It outlines the case for basic income in Indian context. This chapter provides the broad research question, objectives, methodology and finally limitation of the study.

Chapter 2- UBI-An Alternative Approach to In-kind Transfer

This chapter presents the broad theoretical framework of origin of welfare and welfare state. It introduces ‘in-kind transfer’ and ‘direct benefit transfer’ and tries to understand the shift in welfare system from in-kind transfer to cash transfer. Then it introduces Universal Basic Income as an alternative approach to the in-kind transfer. Finally it throws a comparative study between cash transfer and in-kind transfer.

Chapter 3 –International Experience on Basic Income Policy

This chapter contains the literature review of Basic Income experiments around the world. It explains in details the objectives underlying provision of basic income, procedures of implementation, selection of beneficiaries, payment methods. It then summarises the impact of the scheme on poverty, human capital formation through education and skill development, health and nutrition, employment and economic activities, indebtedness etc. Studies have been taken from various working progress, final reports and websites.

Chapter 4 – Cost estimation of Universal Basic Income

The objective of the third chapter is to estimate the cost of providing UBI at different level where the central focus has been alleviation of poverty. It includes five different basis for determination of the level of UBI to be provided and total cost for providing each of the UBI level. It incorporate the importance of inter-state price differential in deciding poverty level among states and hence suggests for different level of UBI for each states. This is a departure from mainstream understanding about UBI, where everybody receives the same amount of money. Apart from universal basic income, it argues for Targeted Universal Basic Income where certain section of the population receives the benefit. Although this is outside the fundamental domain of a true UBI, it's considers the affordability of the economy with limited resources.

Chapter 4-Conclusion

This chapter contains the concluding remark on Basic income as a policy and it's affordability in Indian context.

Chapter-2

UBI-An Alternative Approach to In-kind Transfer

Defining Social Welfare and Welfare State

Though the term Social welfare doesn't attach any specific definition, it refers to all those activities and services towards helping the poor, promoting the well-being of the citizens and efforts to eliminate the incidence of social insecurities. The welfare culture, in a strict humanitarian perspective, originates from the postulates that the communities have a moral responsibility to help the poor who can't afford a basic living by themselves. This ancient welfare culture, which was unorganized and voluntary in nature, emerged as a concrete form of welfare with the intervention of formal institution like a state. And the intervention of state in the public lives at the time of necessities, shifted the paradigm of welfare culture from a charitable service to a right based approach.

Post-independence, the introduction of The Constitution in 1950 was a major breakthrough in the welfare system of India. The Constitution of India declared India to be a welfare state and made the provision of Directive Principles of State Policies to ensure economic and social welfare of the people. In a welfare state paradigm, the state bears certain responsibilities for protection and promotion of economic as well as social well-being of its citizens to ensure a decent living for all based on the principles of equality of opportunities and equitable distribution of wealth. Mainly in the prospect of a developing country with miserable socio-economic inequality, where by certain vulnerable sections of the society are deprived of a basic living, the need for a welfare state is imperative. The welfare state can operate in three different directions;

- First, by guaranteeing all the citizens a minimum income to reduce poverty.
- Second, by narrowing the extent of insecurity by enabling individuals and families to meet certain "social contingencies" (for example, sickness, old age and unemployment) which lead otherwise to individual and family crisis.
- Third, by provision of certain basic social services like education, health care, old age care etc (Briggs, 1961).

India, being welfare state, has vested extensive concern for social policies in its development planning. Poverty reduction, food and nutrition sufficiency, inclusive growth with reduced inequality have dominated the welfare paradigm of Indian state.

Defining in-kind transfer and Direct Benefit Transfer (DBT)

Around the world, in-kind transfer has been a dominant public spending policy. In India also major public spending on social security and welfare takes the form of in-kind transfer. In-kind transfer is a type of public spending targeted at a specific population group with certain conditionalities. This means, to receive the in-kind transfer a person must comply the pre-determined characteristic or do specific work requirement. In-kind transfer consists of providing goods and services that the government thinks most necessary considering the basic living standard of the country. In this regard, government subsidies on various household consumable goods constitute a major proportion of government transfer. Food, fertilizer and fuel subsidies are at the core of in –kind transfer by the state. For example, a centrally sponsored scheme the "National Programme of Nutritional Support to Primary Education (NP-NSPE)" was launched on 15 Aug 1995 (Mid-Day Meal Scheme). The objective of the program was to enhance the

enrollment, retention, attendance as well as improve the nutritional standard among the children. Here the targeted groups are the school going children from class one to class five. The fundamental justification for providing in-kind transfer lies in efficiency of the transfer in generating the desired goal which is set prior to the actual transfer.

As opposed to in-kind transfer, direct benefit transfer is a mechanism whereby the government directly transfers money to the beneficiary's account. This method doesn't involve any kind of exchanges of goods or services. There are only two ends in this system, the government body that transfers the benefit amount and the recipient who receive the benefit. This direct benefit transfer method has two different models, one that goes in line with in-kind transfers which are conditional in nature whereby certain strings are attached about who to be the recipient and how to spend the money received. On the other hand, direct benefit transfer which are unconditional in nature. The second type of transfer doesn't comply any work requirement or doesn't impose any restriction on the way the received money is spent.

Experimenting Cash for In-kind Transfer in India

As stated above, in-kind transfer consists of providing certain goods and services that the government thinks most necessary considering the basic living standard of the country. So, the purpose of providing in-kind transfer is in one way enhancing the welfare of the recipients and secondly to alter the consumption basket of the recipient that the government thinks appropriate for them than providing free reign over spending of the equivalent resource provision. For example, if the government switch its welfare spending from providing PDS (that provides subsidized items such as rice, cereals, kerosene, sugar etc depending upon the state functionaries)

to provide cash payment equal to the PDS amount. The expenditure difference between these two methodologies (expenditure on PDS and equivalent expenditure on cash) of providing the welfare benefits is called as “dead-weight-loss” or “inefficiency”. And as the gap increases, the total dead-weight-loss or inefficiency increases.

A report titled “Direct Benefits Transfer in Food Results from one year of Process Monitoring” published in the year 2017 by the Government of India on Direct Benefit Pilot. This pilot was initiated in three Union Territories of India; Chandigarh, Puducherry and Dadra and Nagar Haweli. It can be seen as shifting away from food grain supply through PDS to cash equivalent of the PDS benefit.

J-PAL South Asia studied the pilot in three phases from January 2016 to March 2017. It focused on its three dimensions which are ‘coverage of the scheme, consistency and regularity of the payment’, ‘comparative analysis of recipient’s expectations, preferences and grievances between the old and new scheme’ and ‘economic burden on behalf of the recipient in both cases’ (Direct Benefits Transfer in Food Results from one year of Process Monitoring, 2017, p. 9).

It founded that the quality of implementation improved and the coverage also increased from 47% to 78 % of the beneficiaries (with awareness about transfers and verification of passbook) (Direct Benefits Transfer in Food Results from one year of Process Monitoring, 2017, p. 9). The lower coverage rate in the first survey was the result of un-availability of reliable information about transfer to the passbook. The percentage of beneficiaries who did not receive transfers with passbook proof, has been reduced across all three UTs (p. 10). As the quality of the program improved, beneficiaries’ preference for the DBT over PDS increased and majority of the respondents showed a preference towards cash than food grain through PDS. This increased

preference towards DBT was also attributed to many dimensions; consumption of higher quality food grain from the market than that was available through PDS, personal choices in buying the consumption goods which now include dietary diversity.

Those who still had a preference for the old system (PDS) stated the reason of consistency in getting the goods every month. PDS also involved less cost in terms of accessing the benefits and they had lower spending out of own pocket for the food grain . On the other hand, DBT was costly to get access to the money and then to the market for the goods. Thus, the economic burden was higher in DBT than PDS. DBT was again reported to be insufficient when time cost and expenses were added to avail the adequate quantity of food grain (p. 15), but this could be the result of consumption of higher quality food grain that they tend to buy from the market. So the pilot was a mixed bundle of positive and negative outcome. But in general after the final survey higher percentage of the recipient showed their willingness for DBT. The preference for DBT was highest in Pondicherry which increased from a minimal of 32% in the first survey to 77% in the final survey (p. 12).

Another cash transfer scheme was implemented for ‘Mukhyamantri Bicycle Yojna’ in the state of Bihar whereby the recipient received cash benefits rather than getting bicycles. The program was launched in the year 2006 with the objective of increasing the enrollment ratio in secondary school, which initially provided Rs.2000 to every girl children of class 9, but later on in 2009-10 it included all the boys of the same class and the amount of the benefit was also increased to Rss.2500. Onwards academic year 2012-13 conditionality of 75% compulsory attendance has been attached that makes the program an universal (but targeted) conditional cash transfer program. Girls' age-appropriate enrollment in secondary school increased by 30% and the corresponding gender gap was reduced by 40% (Muralidharan and Prakash 2016)

An extensive study has been done by Maitreesh Ghatak (LSE), Chinmaya Kumar (IGC Bihar) and Sandip Mitra (ISI Kolkata) and their findings are

- The scheme had coverage of 97% of eligible beneficiaries, as only 3% of the beneficiaries denied receiving the benefit despite eligibility criteria.
- 93% of the beneficiaries adequate amount of benefit.
- The cash transfer program was satisfactory as only 9% of the beneficiaries had any kind of grievances related to the program.
- 98% of the beneficiaries used the money to buy a bicycle (Maitreesh Ghatak, 2016, p. 53).

Despite a reasonably good performance of the cash transfer scheme, only 45% of the beneficiaries preferred cash and rest of them still preferred in-kind transfer (p. 54). The reasons that the authors provided for such a preference towards cash lie in line with both supply and demand side constraints. The supply side constraints include; the effective implementation of the program, delay in payment, inadequacy of benefit, conditions attached to receive the benefits etc. The demand side constraints mainly included the financial condition of the households as they need to add some more money to get a better quality bicycle and they tend to borrow money for the purpose. Intra-household conflicts also played a role in determining the preference. The access and transport to the market (and associated costs) influenced the preference.

Universal Basic Income Defined and Introduced

Universal Basic Income (UBI) is a form social security model that guarantees a periodic cash payment unconditionally to each and every citizen of the particular area or the country without any means tested or having any work requirement. This means regardless of socio-economic status, every individuals residing in the particular area or the country are entitled to receive the benefit. This is a minimum floor below which income of any individuals can not fall. “The “basic” of basic income is thus meant to capture that it provides a reliable economic foundation upon which incomes from other sources can be freely added, not that it is “definitionally … tied to some notion of basic needs” (Parijs P. v., 1995). As stated above UBI has also been termed as ‘Citizen’s Income’, ‘Citizen’s Grant’, ‘Basic Income Guarantee’ etc across the world but carry the same features as UBI. UBI has mainly five characteristic as defined by Basic Income Earth Network (BIEN), a research organization working to facilitate and promote the idea of Basic Income in public policy around the world.

- Periodic; Cash payment under this model occur in a periodic but regular basis which may vary from country to country. This is not any lump-sum one time grant. The main objective of a regular periodic cash benefit is to provide security to the individuals from socio-economic shock, which has been discussed in later chapter.

- Cash Payment; UBI is paid (or transfer) in cash unlike many other in-kind transfer (like food or service). The benefit of providing cash payment is to render individual freedom on spending of the money on the good they want.

- Individual; The benefit is provided to every individual rather than household. Individuality is to improving the targeting because household targeting sometimes doesn't consider family demography which undermine the benefits.
- Universal; Universality comes from the right based approach that UBI promulgates. Every individual is entitled to a share in the total wealth of the earth and hence it in broad sense doesn't exclude anybody; rich, poor irrespective of economic status are entitled to this benefit.
- Unconditional; UBI is unconditional in two aspects 1)it does not entitle any work requirement and 2) doesn't necessitate spending of the benefit on specific goods (About basic income).
- These salient features of UBI make it different from other forms of social security which are mainly targeted and conditional in nature. The idea of UBI has been accompanied with saying like "an idea whose time has come", "an end to poverty", and "venture capital for the people" etc.

UBI: Policy Issues and Concerns

1. UBI vs In-kind Welfare Scheme

The welfare schemes in India as well as many other countries have been dominated by in-kind transfer from the state since the dawn of the welfare state paradigm. But recently the policy debates have hovered around shifting of public expenditure from in-kind transfer to direct cash transfer as we saw above the pilot program in three Union Territories of India for shifting to cash transfer instead of in-kind transfer, and 'Mukhyamantri Bicycle Yojna" in Bihar. The rationale for such a substitution can be found in many directions although UBI itself possess certain constraints as explained below.

- **Targeting**

Targeting is considered to be one of the most prevalent inefficiency of any in-kind welfare program. The inefficiency in targeting occurs mainly due to four reasons; leakage out of the system, resources misallocation, benefits to non-poor and exclusion of poor. The below figure presents targeting error two most coverage welfare program; PDS and MGNREGA for 2011-12

Figure 1- PDS Targeting (2011-12)

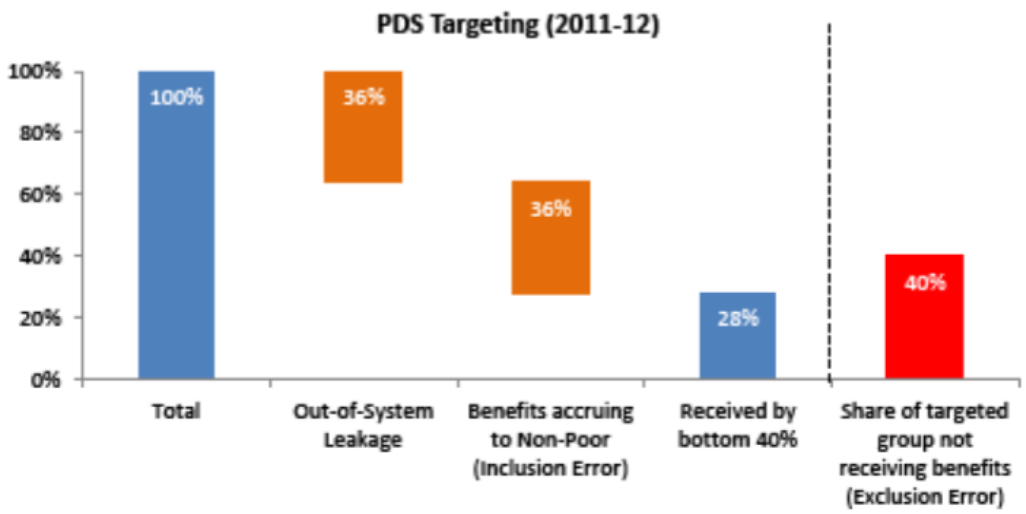
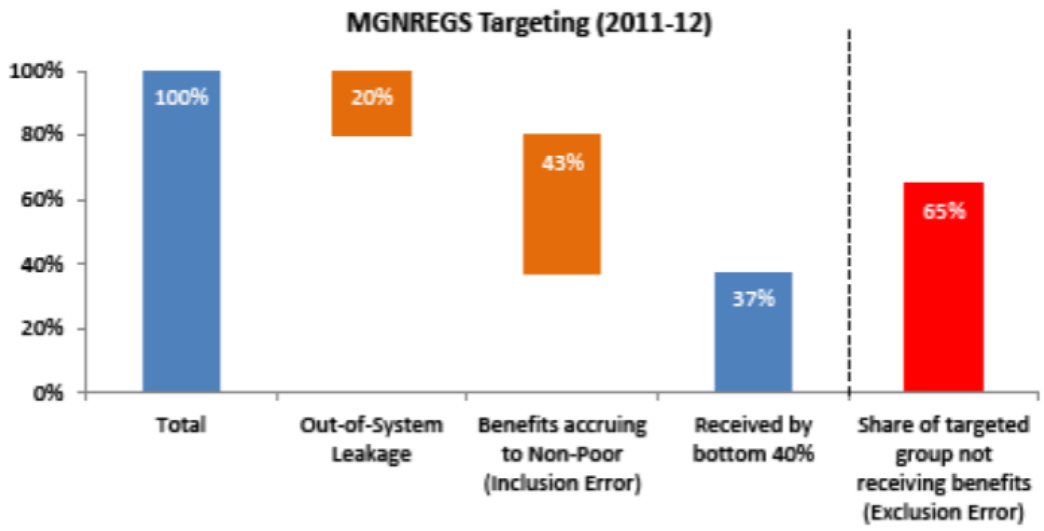


Figure 2- MGNREGS Targeting (2011-12)



Sources- Economic Survey 2016-17

We can observe a very high exclusion error in the above figures, as 40% and 65% eligible beneficiaries are excluded from receiving the benefit of PDS and MGNREGS respectively. If we look into the case of PDS only 28% of resources goes to the poor as 36% of resource goes to

non-poor and another 36% of resource turns out to be in out-of –system leakage. In case of MGNREGS, 37% of the allotted resources is delivered to poor where as 43% of the resources goes to non-poor and another 20% erodes as out-of-system leakage as shown by Imbert and Popp (Economic Survey 2016-17, 2017, p. 199). Here we can see the in- kind transfer have huge inclusion and exclusion error.

On the other hand, if there is implementation of UBI, the targeting error will be minimized (almost to zero) as the benefit will accrue to everyone which will eliminate inclusion and exclusion error. It will also check the out-of-system leakages as there will be transparency in communication of benefit from both the ends. So UBI would involve better targeting than in-kind transfer.

- **Freedom of Choice**

Here the freedom of choice is restricted to two forms of freedom, firstly with respect to consumption. Freedom of choice here refers to the ability of the recipients of the benefit to spend the benefit as they think suitable for themselves. The rationale for providing in-kind transfer lies in limiting the sphere of choices to certain commodity and services only that the state thinks suitable for the individuals. It also undermines the ability of the individuals to make correct decisions. UBI on the other hand enable them with a free choice over spending of the money received. Guy standing also argues that conditions restrict the freedom and hence they should be given full freedom on spending of the benefit (Standing, 2016). This is based on trusting the people for making their own decisions which is often criticized on the ground that poor people will spend the money on socially bad goods like alcohol, tobacco etc but many studies of basic income experiments shows that the actual consumption of such products declines which could be

attributed to psychological factors that trigger such decisions. UBI thus acknowledges that people can make their own decisions which are best suitable for their own good.

The second kind of freedom of choice deals with the freedom to stay in or out of employment. A regular flow of income would enable them to stay outside market without any pressure to do labour under certain unfavorable working conditions. Without any certain income flow, people are forced to do labor. Without any certain income flow, people in precariate class is forced to take more work for labor and for reproduction (Standing, 2016). A basic income also gives them control over time between shifting from one job to another and helps them make rational decisions. It also enables them to works that are more satisfying and socially valuable than other jobs. He believes work should be separated from jobs as well as labor and all kind of works should be treated equally "Work must be rescued from jobs and labour. Another implication is that when they stay outside employment, they can invest the time in acquiring productive skills and improve their economic insecurity.

2. UBI and Economic Security

Economic insecurity in simplest form refers to the adverse volatility in one's economic conditions. Economic insecurity can arise from a wide dimensions like nature of work, employment status, level of income, future risks etc. Guy Standing argues everyone should have some basic security in terms of affordability and coping up with the adverse shock. This basic security will enable them to recover from the shock in a tolerable way (Standing, 2016). "The distribution of economic security is more unequal than the distribution of income" (Standing, 2014). In such a case a basic income can render economic security to deal with such circumstances. The prospect of insecurity differs from rural to urban. When we look into the

rural economy, it mostly consists of the poorest population of the country with a lower standard of living and higher economic insecurities. Agriculture and seasonal manual works constitute a major part of employment and are the main source of earning a living for them. NSS (68^{TH}, 2011-12) estimates 49% of total workforce is engaged in agriculture and about 70% of rural workforce is engaged in agriculture. But agriculture is more prone to biological shocks due to its dependency on climate change. Draughts, heavy rain fall as well as other biological events adversely affect the agriculture sector and the economic life of agriculture dependent people. One single crop failure can lead to heavy indebtedness and farmer suicide. About 12,602 persons engaged in farming have reported to commit suicide during 2015 that stands for 9.4% of total suicides (1,33,623) in the country (NCRB,2015). Apart from biological factors, agricultural income is also dependent on price fluctuation in the market. This agricultural distress poses the most important economic insecurity in unorganized sector of the country. On the other hand, the urban economy which is driven by advanced technology and artificial intelligence face the problem of employment opportunity. The emergence of robots and artificial intelligence will take over the employment opportunity labourers. A regular provision of Basic Income which strengthens the financial capacity will reduce this kind of economic insecurities. It also enhances the economic activities that supplement extra income to the poor as seen in the case of Madhya Pradesh UBI pilot.

3. Emancipatory Value of UBI

The emancipatory value of UBI can be observed in both individual and family basis. Individually it envisages economic freedom to all by providing cash benefit for their living irrespective of their work status. When we look into the gender aspect of this freedom, women who are mostly dominated in a typical family scenario find themselves free from dependency. John Locke named

as the ‘Father of Liberalism’ advocated democratization which implies universal freedom, equality and independence. As seen in the Madhya Pradesh basic income pilot, after getting basic income women could have a voice in decision making of the household. They enjoy freedom the way they want to spend their money. Basic Income also delivers freedom to the elderly who are incapable of earning a living and dependent on others for the same. Thus Basic Income renders a live of dignity to all those dependent people.

Again the rural economy is mostly characterized by high indebtedness and high level of poverty which are interrelated and make a vicious circle of trap. This indebtedness and poverty restrict the poor to prosper in their life as well as affect their next generation. Indebtedness is also associated with slavery and exploitation of the poor through debt-bondage by the land lords or money lenders. A regular basic income helped reduce indebtedness as seen in the pilot program in Madhya Pradesh. Reduction in indebtedness further reduces poverty and enhances other economic activities as resource can be put in them. Thus basic income improves the social as well as economic life of the poor (Bharat, 2014).

Conclusion

Universal basic Income. Finally it provides a comparative study of UBI and in-kind transfer. This chapter introduces social welfare and welfare state. It also talks about the origin of social welfare and its dynamic approach from charitable institution to a right based approach. It outlines the operation of a welfare state. It then introduces two modes of welfare program ‘in-kind’ and ‘in-cash’ transfer. It defines in-kind transfer as benefit through goods and services by

the state and in-cash transfer as giving direct cash to individual. It also tries to understand the shift in welfare policy from in-kind to cash mode as it puts two cases of India. It then introduces

Chapter 3

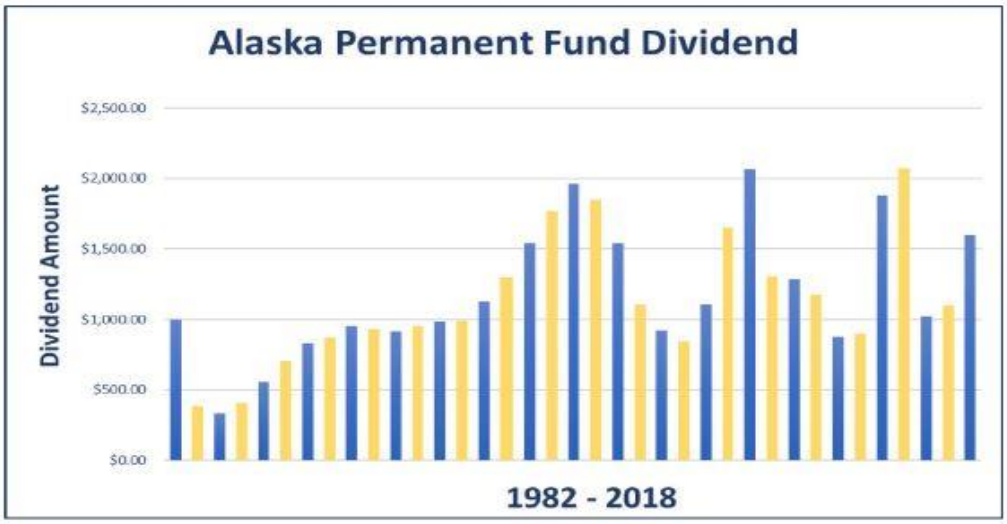
International Experience on Basic Income Policy

As stated in the previous chapter a concrete idea for basic income dates back to 18th century when English radical thinker Thomas Spence and American revolutionary Thomas Paine argued for a welfare system that guarantees a minimum income to every citizens of the territory as a matter of basic human right. But this idea could not gather enough attention until late 20th century when similar kind of welfare systems was initiated in United States and Canada in the form of Negative Income Tax. Later in 1980s the idea got momentum in Europe with establishment of Basic Income European Network which works as an institution to spread the idea of basic income through arranging international conferences around the world. Several European countries have conducted referendums on implementation of basic income transfer, Switzerland voted down the proposal with a wafer thin majority. The moment of basic income also spread to Latina America, Brazil taking a lead with its Bolsa Escola program, and now quickly spreading to Africa and Asia. Moreover, the idea of basic income has gathered even greater support as a welfare system to end poverty and a protection from increasing automation and artificial intelligence. A number of large-scale experiments as well as small-scale pilots have been made in various countries to assess the feasibility, costs and effect of full-scale implementation of basic income or related welfare schemes. This chapter provides a brief review of such experiments around the world, before we discuss the issue in the context of India in the next chapter.

Alaska Permanent Fund

A kind of DCT (not exactly like a UBI) was enacted in Alaska, an oil rich state in the US, in the early 1982 and named as The Alaska Permanent Fund. It is a constitutionally established permanent fund managed and owned by the Alaska Permanent Fund Corporation (APFC). The objective of the program was to benefit the current as well as future generations of Alaska from the oil resource present in the area whereby 25% of the oil money was used to create the fund for investment. The program pays out annual dividend to every citizen of Alaska who has lived there from January 1 to December 31. The amount of the payout differs depending upon the market performances. In 2018, every Alasan who qualify for the benefit were paid a dividend of $1,600.00, and a total of $1,023,487,200 was distributed (Permanent Fund Dividend).

Figure 3- Alaska Permanent Fund Dividend



1982	$1,000.00
1983	$386.15
1984	$331.29
1985	$404.00
1986	$556.26
1987	$708.19
1988	$826.93
1989	$873.16
1990	$952.63
1991	$931.34
1992	$915.84
1993	$949.46
1994	$983.90

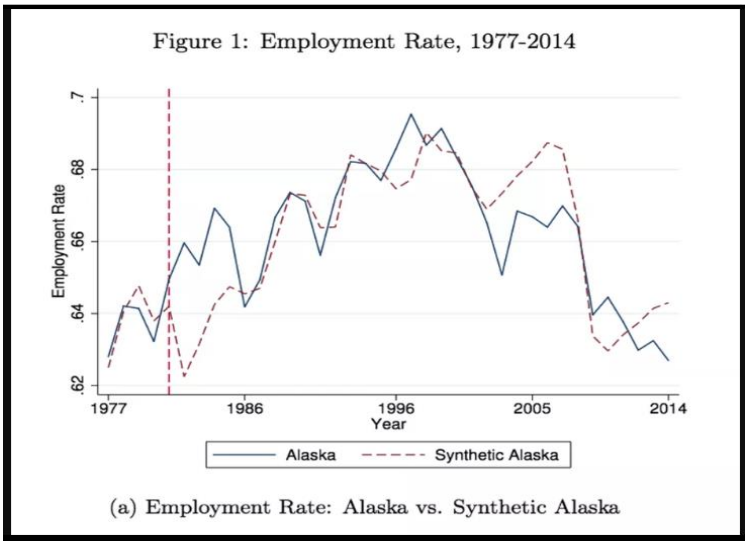
1995	$990.30
1996	$1,130.68
1997	$1,296.54
1998	$1,540.88
1999	$1,769.84
2000	$1,963.86
2001	$1,850.28
2002	$1,540.76
2003	$1,107.56
2004	$919.84
2005	$845.76
2006	$1,106.96
2007	$1,654.00

2008	$2,069.00
2009	$1,305.00
2010	$1,281.00
2011	$1,174.00
2012	$878.00
2013	$900.00
2014	$1,884.00
2015	$2,072.00
2016	$1,022.00
2017	$1,100.00
2018	$1,600.00
Total	$42,821.41

Source-Alaska Oil and Gas Association (AOGA)

One major impact of this fund was observed to reduce poverty among the Alaskan. The fund alone contributes enough money to eliminate $2 per day poverty in Alaska. The fund also increased the working hours (mainly due to increase in part time work) as compared to synthetic Alaska (a combination of many other states with similar employment pattern as Alaska) and employment rate didn't decline as critics of free cash payment claim. Economists Damon Jones and Ioana Marinescu estimated the employment rate defined as the ratio between currently working person upon the overall population between Alaska and synthetic Alaska for the period before and after 1982 (Jones & Marinescu, 2018).

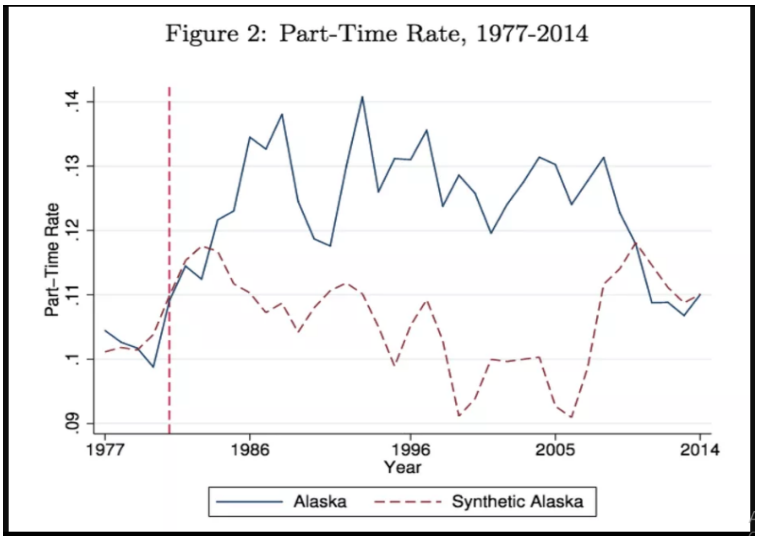
Figure 4- Employment rate 1977-2014



Source- Damon Jones and Ioana Marinescu estimates

The figure shows a similar trend for both the cases although there is difference at times. But they found difference in case of part time employment as shown below.

Figure 5- Part time rate 1977-2014



Source- Damon Jones and Ioana Marinescu estimates

As the figures show there is an increase in part time work in Alaska as compared to synthetic Alaska. Damon Jones and Ioana Marinescu stated two possible reasons for this rise in part time employment. Contrary to popular beliefs; dividend money enabled them sustain their life with working less hours and hence shifting out of full time employment and into part time employment. Indeed, people, not working earlier, started working as a result of the program which enables them to pay for transport, child care and other fixed costs associated with employment. So Alaskan experiment lends evidence to trash the argument that such income transfer encourages laziness or work effort.

Brazil

The idea of direct cash transfer emerged in Brazil in late 1980's when Brazilian policy making centered around assisting minimum income to the vulnerable after inclusion of social assistance as a basic right in the Constitution in 1988 (Kathy Lindert, 2007, p. 10). The policy makers considered minimum income to the poor would break the structural source of poverty, through human capital formation in the form of better education to the children. It is contemplated that a minimum income from the state would reduce the short-term poverty as well as economic insecurities among the poor and that in a way enable the parents to send their children to school instead of sending them to work, because child labor is a general case among poor families across the world. Brazil is also known for highest levels of inequality and urban poverty seen in the slums of Rio de Janeiro. The social democratic parties vociferously argued for cash transfer as the minimal measures for achieving equity. Cash transfer program, from policy debate to actual implementation took up when two separate cash transfer programs were launched in Brazilian municipalities. Governor Cristovam Buarque (Workers Party, PT) launched The "Bolsa Escola" program in the Distrito Federal on January 3, 1995 and a similar program the "Guaranteed Minimum Family Income Program (PGRFM) was also started by Mayor José Roberto Magalhães Teixeira (Brazilian Social Democratic Party, PSDB) in the Campinas Municipality on January 6, 1995 (p. 11). The structure of both these programs was similar and in both cases cash was transfer to the poor, identified through means tested (income ceiling), with some conditionalities in the part of the recipients. As stated above, the policy debate mostly focused on human capital formation as a way to break the inter-generational poverty, these conditionalities included i) enrollment of children in school education and ii) minimum school attendance (80-90%) to ensure effectiveness of the program (p. 11).

After that Brazil has launched many cash transfer programs which were all conditional, with separate objectives in every program. In the year 2001, The Federal Bolsa Escola was launched by the Federal Government of President Fernando Henrique Cardoso. The main objective of this program was long-term poverty eradication through educating the children. Other objectives include reduction of short term poverty through cash transfer, reduction of child labor and work as a safety net (p. 12). This program targeted the poor families with per capita income no more than R$90 per month and provided a grant of R$15 per month per child (up to 3 children) with condition of 85% school attendance by the children.

Another conditional cash transfer program "Bolsa Alimentação" was launched on 2001 to address the problem of nutritional deficiencies and infant mortality in Brazil. The objective of this program was to improve the health care of children and pregnant and lactating women. Under this program, poor families with per capita income not more than R$90 received R$15 per child (up to 3 children till they turn 7 years old) whereby the pre-natal and post-natal health check-ups,vaccination of children, monitoring the growth of children were to be done by the recipients (pp. 12-13).

In the year 2002, the Federal government started phasing out the cooking gas subsidies which was compensated by a cash transfer scheme "Auxilio Gas". Unlike the previous three program, Auxilio Gas was unconditional which paid R$15 to the poor families whose monthly per capita income was below R$90 (p. 13).

Yet another program "Programa do Cartao Alimentacao) was introduced under the broader "Fome Zero (Zero hunger)" program to ensure food security among the vulnerable which paid R$50 to be spent on food consumption only. Brazil had initiated many social safety schemes

under different ministry which crated administrative inefficiencies by increasing the administrative costs. So the idea of unifying similar schemes hovered around the policy making which would be efficient in administrative cost to selection of beneficiaries to proper monitoring of the scheme. And finally in the year 2003, the Brazilian government introduced the “Bolsa Familia” which was a consolidation of earlier four conditional cash transfer programs Bolsa Escola (2001), Bolsa Alimentação(2001), Auxilio Gas (2002), “the Programa do Cartão Alimentação” under Fome Zero (Zero Hunger,2003). And the broad objectives were set i) reduction of short term poverty and inequality through a direct cash transfer and ii) overcoming inter-generational poverty through human capital formation by schooling (pp. 13-15).

The procedure to identify the poor was subjective and based on income ceiling. Families with monthly per capita family income R$100 constituted moderately poor families and R$50 constituted extremely poor family which combined to 11.2 million families to be eligible for Bolsa Familia benefit during the initial period in 2003. This income limits were increased to R$120 and R$60 for moderately poor and extremely poor families respectively considering the increase in cost of living in 2006. The transfer amount in this program considered the number of children in the family and paid R$15 per month per children(0-7 years, maximum up to 3) under the condition that i) they are regularly vaccinated ii) health check-ups and growth monitoring iii) enrollment in school with 85% attendance. Along with that pregnant and lactating women were subject to pre-natal and post-natal health check-ups to be eligible for the benefit. The scheme also provided R$50 per month to the extremely poor families without regard to children. The transfer mechanism was done through banking system cards. As stated in the objective of the program, the conditions imposed to avail these benefits were such that it would reduce short-term poverty and it will invest in human capital in a way that would aim at inter-generational

poverty reduction. Failing to comply with any of these conditions would result in temporary termination in receiving the benefit and in case of repeated failure, removal from the getting the benefit. Annual household survey (PNAD 2004) stated 20-25% of Brazil's inequality reduction and 16% decline in extreme poverty is attributed to Bolsa Familia. In case of education, percentage of children with less than 85% attendance was reduced systematically symboling a progress in the scheme. Both children and women have complied with the health conditioning and as a result there was no non-compliance of health condition as of August 2006 (Kathy Lindert, 2007). Therefore, a very powerful example of cash transfer scheme, which is conditional, comes from Brazil, considered to be a highly successful for poverty alleviation.

Mexico

Following the Brazilian model of conditional cash transfer in late 1990's, Mexican government announced a conditional cash transfer scheme as a social safety net for the vulnerable sections of Mexico. Originally the scheme was named as *Progresa* in 1997 but it was re-launched as Oportunidades in 2002 with same objectives as earlier. This social safety net was in operation from 1997 to 2012, 15 years which makes it the largest scaling up scheme of this kind. The objective of the scheme was to address poverty, immediate and long term poverty, by promoting education as a form of human capital investment. Apart from Oportunidades, other Maxican social policy have also been centered around reducing poverty, malnutrition and promoting education of the children. For example, Food Support Program (Programa de Apoyo Alimentario-PAL) basically aimed at nutritional aspect of poor families which mainly targeted children pregnant and lactating women.

Progresa (Oportunidades) which initially started in 1997 with 2.5 million families had a coverage of 6.5 million families by the end in 2012. Initially the program covered the rural villages only, but later on in 2001 it extended to small urban centers and further to city dwellers in 2002. Identification of village was done through "marginality" of the village and some other proxies. For the beneficiaries selection, socio-economics dimension was considered. Among the factors that were considered for eligibility, housing type, average number of people residing in each room, and adult literacy, occupation and lacking basic services such as electricity, piped water and sewers at home. The average family who were selected for the program had an income of only $18 per capita per month though this program did not consider any fixed income level. Once a family registered for the program, their eligibility goes on for three years despite any changes in their income. The grant is transferred through electronic cards and to the account of female head of the family.

The grant that is transferred in this program consists of two heads; education grant and health grants. Education grant is provided when the children start primary schooling and continues through high school. The monthly benefit grants starts from about $10.50 in the third grade of primary and when they attend third year of high school it is about $58 for boys and $66 for girls (girls get higher grant because it incentivizes them to remain in school as there is a higher drop-out rate for girls). In case of health grant, nutrition aspect of children, pregnant and lactating women is considered and a fixed money transfer of amount $15.50 per month is credited to the beneficiaries. In the short term this incentives aims to help them improve their economic condition and reduce poverty and in the long term, to create human capital by promoting education and health of the children (Stephanie Bailey, 2007).

The evaluation of the impact of the program was carried out by International Food Policy Research Institute (IFPRI). As per the report submitted by the IFPRI, percentage of boys and girls entering to the secondary school increased by 20% and 10% respectively (Claudio Loser, 2012, p. 192). Children aged 1 to5 who received the grants had 12 percent lower incidence of illness than non-recipients which could be attributed to proper nutrition (Claudio Loser, 2012, p. 192). A study by Behrman and Hoddinott (2000) reported that the children who availed treatment between 12 to 36 month of their age had 16 % rise in mean growth rate per year (Claudio Loser, 2012, p. 192). Another study (Latapí, 2005; González de la Rocha, 2005) found that this program helped reduce household vulnerability by investing in productive asset by the household from a regular income flow and it also enabled them to repay their debts and break the cycle of poverty (Margaret Arnold, 2010).

As we see, the Mexican experiment was directed towards health and education aspects which are considered among the necessities of human life. Investment in education would enhance the human capital formation that can have a widespread impact on current as well as their future generation by enhancing work skills and reducing poverty. Proper health conditioning is also associated with mental and psychological wellbeing that affect the decision making of the individuals. It also affects the productive capacity of the individuals. This experiment suggests even a modest cash transfer have positive impacts on the lives of people.

Namibia

In January 2008, Namibian government NAMTAX announced a 24 month Basic Income Grant (BIG) cash transfer pilot as a social safety net against poverty. The administrative and financial

responsibility for implementing the BIG Pilot was held by The Evangelical Lutheran Church in the Republic of Namibia (ELCRN). In regard of funding, fund raising campaign was launched prior to the announcement of the pilot. Namibia's first Prime Minister Dr. Hage Geingob extended financial support to implement the pilot.

The Otjivero_Omitara area was selected for the implementation of the pilot because of its manag eable size, accessibility and poverty. Registration for BIG was done through survey of each household for document verification. Every citizens below age 60 living in Otjivero-Omitara area since July 2007, were given BIG of N$100 per month from January 2008 to December 2009. This pilot did not include people aged 60 because the universal State Old Age Pension was operating for senior citizens. The amount given in BIG was equal for all citizens. For smooth transferring of BIG, recipients got a “smart card” that carries their name, ID numbers, picture of the recipients and a microchip with date of birth, fingerprints and details of the date an d quantity of BIG received. In order to receive the money, they have to place the card on the cash dispenser machine which was operated through fingerprint of the recipient. On withdrawal of money, the microchip stored the data about date and place of the withdrawal that would prevent double payment. Later on, in July 2008, Namibian Post Office held the responsibility of BIG distribution through Post office smart card saving account for easy access by the people and on 15th of each month the pay-outs were scheduled (Claudia Haarmann, 2009).

To access the impact valuation of the BIG pilot on the living of the recipient, both pre and post implementation surveys were carried out. A baseline survey in November 2007 was conducted, prior to the actual implementation, to collect information about socio-economic conditions of the selected areas that included health, education, poverty, malnutrition which were center points of

BIG pilot. After the implementation of BIG pilot, two panel surveys in July and December 2008 were conducted to evaluate the progress of the pilot in achieving the desired outcomes. In addition to that, information was collected from local nurses, police chief, local leaders and shop keepers to check the validity of the information provided by the recipients themselves (Claudia Haarmann, 2009).

Before the implementation of BIG pilot, poverty rate was so high that 76% of people fell below Food poverty line in November 2007. After one year from receiving BIG, this was reduced to 37% . And the families that were not affected by in-migration, the actual reduction was to 16% because BIG excluded migrants. The level of infant malnutrition, based on WHO measurement technique measured in terms of weight to height, was down from 42% of underweight kids in No vember 2007 to 17% in June 2008 and 10% in November 2008.. The introduction of the BIG has led to an increase in economic activity. The rate of those engaged in income generating activities (above the age of 15) increased from 44% to 55%. “Thus the BIG enabled recipients to increase their work both for pay, profit or family gain as well as self-employment. The grant enabled recipients to increase their productive income earned, particularly through starting their own small business, including brick-making, baking of bread and dress-making. The BIG contributed to the creation of a local market by increasing households' buying power. This finding contradicts critics' claims that the BIG would lead to laziness and dependency” (Claudia Haarmann, 2009).

Prior to the introduction of the program, the school attendance was low with high dropout rate and Pass out rate also stood at about 40% .Many parents were unable to pay the school fee. But soon after the BIG was introduced, 90% of the parents were able to pay school fees and even they could purchase school uniforms for their children. Non-attendance attributed by financial

reasons was reduced by 42%. It also reduced the Drop-out rates at the school which fell from almost 40% in November 2007 to 5% in June 2008 and further to almost 0% in November 2008.The impact of BIG on health care of citizens has been observable as they spend more on health check-ups it increased the income of the health care service from N$ 250 per month to about N$ 1,300 as reported. The BIG also enabled them to repay debt and average household debt was reduced from N$ 1,215 to N$ 772 between November 2007 and November 2008. Savings of the household also increased during that period, this increase in in saving helped them own large livestock, small livestock as well as poultry. Overall crime rate reported to be lower by 42%, stock theft fell by 43% and other theft by nearly 20% which could be as a result of security of economic prospect of the BIG recipient. This BIG had a emancipatory role in women's lives whereby they freed themselves from the men in their daily living (Claudia Haarmann, 2009).

This pilot is an example of how basic income can be a mechanism for poverty reduction. It also showed how the socio and economic condition of poor family changes after an income security. It worked as a medium of economic growth and development at the ground level and boosted local economy.

Ontario

Arguments for a BIG are quite popular in Canada, which has a much stronger welfare state in the North America. A form of BIG was proposed by the Special Senate Committee on Poverty (1971) and the Royal Commission on Canada's Economic Prospects (1985). "But the renewed interest in the idea of a basic income guarantee for Canada is partly driven by growing inequality and the inability of redistribution policies to address it" (Robin Boadway, 2016). In Ontario,

there has been a declining trend in welfare income of single employable person since 1994 (Anne Tweddle, 2014). “Compounding this is the increase in earnings volatility resulting from the stagnation of full-time jobs and the precariousness of employment as technology displaces factory jobs and the forces of globalization result in a race to the bottom among both employers and governments” (Robin Boadway, 2016)Such a macroeconomic necessary asks for some sort of financial stability by the state.

In April 2017, a three year basic income pilot project was introduced by the Ontario government. The objective of the project was to study the impact of basic income on health, education as well as the job prospect of those living on low incomes. It was implemented in three different communities in Ontario; Hamilton, Brantford and Brant County; Thunder Bay and the surrounding area; and Lindsay, this would enable them to figure out the impacts in different geographical setting. . The selection of the beneficiaries was random but the eligible age group was 18 to 64 years old. Thus it was not a universal basic income project. Even the payment was different for different groups. Whereas single household were entitled a benefit of $16,989 , couples received $24,027 together and people with disability were given another $500 per month extra. Apart from this, earned income reduced the benefit by 50%. t”. This means when employment earnings are zero, the basic income provides a person’s total income, which in this case is $16,989 for single individual. Basic income is withdrawn when the earned income gets doubled the benefit i.e $ 33,796... Participants who received the state Employment Insurance or Canada Pension Plan the benefits were reduced by 100% of extra earning (Nancy Beauchamp, 2018).

Kenya

The longest and one of most thorough study of UBI was undertaken in Kenya with the help of an institution named “GiveDirectly” (working towards implementing unconditional cash transfer in developing countries). The program was implemented in Siaya and Bomet Counties consisting of 295 villages and 14474 households, in Kenya. The economic condition of the selected areas was not good, approximately 630 thousand people live below the Kenyan poverty line estimated as less than US$15 per household member per month for rural areas, and US$28 for urban areas (Eduardo Matarazzo Suplicy, 2019). Thus the program was initiated to study the impact of cash transfer on poverty elimination and standard of living of Kenyan in general. The structure of the program was such that it divided the total villages into four categories;

- Comparison Group- 100 villages were selected that did not receive any payment.
- Long-term UBI- 44 villages will receive the payment that would be enough to cover basic needs (US$0.75 per adult per day) for 12 years.
- Short-term UBI- 80 villages will receive the same benefit but for two years only.
- Lump sum UBI- 71 villages will receive an one-time payment equal to the size of short-term transfer (about US$500 per adult) (Eduardo Matarazzo Suplicy, 2019).

The transfer was exercised since 2018 digitally through M-PESA, a mobile money service used widely throughout the country. They can withdraw money or shop at the accredited establishments in village. Along with GiveDirectly, Silicon Valley organization and other organization contributed to raise US$ 30 million to fund the program. The research of this specific program includes, economic status (income, consumption, assets, and food security), time use (work, education, leisure, community involvement), risk-taking (particularly the choice

to migrate or start a business), gender relations (particularly female empowerment), and aspirations and outlook on life. Although there is no follow up survey yet, some interaction with the beneficiaries indicates positive outcomes of the program.

Some of the respondents said their consumer goods basket has been changed to greater variety of goods that now include proper amount of milk, vegetable and other nutritional products. Medical check-ups and spending on medicine also increased after getting the money. Schooling of their children was one of the main concerns for them and now they are able to send their children to school to complete education and bear their expenses. Some of them invested the money on capital goods and started or increased their own small business or other occupations like fishing nets for fishing, buying livestock (goat, cattle) to sell milk, meat etc, land purchasing for fruits and vegetables growing. Their work time also increased after getting the money due to expansion of economic activities which increased their income. Some people used on systems to capture and store rainwater or solar energy for better electricity. They also purchased household appliances like sofa, bed, mattress and electronic items. It also had an emancipatory effect on women as it frees them from domination from husband or families. They could be able to spend money as they want and their importance in decision making also increased (Eduardo Matarazzo Suplicy, 2019).

India - The Pilot Experiment in Madhya Pradesh

The idea of direct cash transfer program is not new to Indian policy makers, although not dominant policy. Indian government has implemented social security net for elderly, physically handicapped, widows in the form of pension and pregnant women get monetary incentives for

better health of their children. All of these programs are direct cash transfer program but they are by nature means-tested (as to be eligible you have to be elderly, physically handicapped or widow) and sometimes conditional (in case of pregnant women regular health check-ups as well as delivery at hospital is required). So the first kind of cash transfer which was not means-tested or conditional, emerged in India when Madhya Pradesh state conducted a Basic Income Pilot in 2013 (A little more, How much it is... Piloting Basic Income Transfers in Madhya Pradesh, India, 2014, p. 8). Being unconditional in nature, this pilot did not attach any restriction on the spending of received amount which was in one way a study of human behavior in decision making. This is different from the earlier cash transfer as pension, from the viewpoint that the nature of recipients of pension that they would spend the money in their basic living. But in later case as everyone receives the money, which has been criticized on many heads like consumption of bad goods, withdrawal from labor market, assessment of spending habit would help the policy making. This pilot goes in complete opposite direction from the National Food Security Act (2013) which aims at providing subsidized food to the poor.

The Basic Income Pilot in Madhya Pradesh was carried out by SEWA (Self Employed Women's Association) with support from UNICEF. The pilot consists of one general pilot and one tribal pilot (p. 9). The reason behind conducting two different pilots was that the tribal in state resides mainly in forest areas and they are considered relatively poorer than non-tribal. For the general pilot, using Randomised Control Trial (RCT) methodology, 8 villages were selected where every individual received the benefit and 12 other villages were taken as controlled village where nobody received the benefit. In order to find out the impact of an outside agency in decision making, SEWA members were active in 50% of both type of village whose responsibility was to direct the individuals to effective use of the benefit money. For tribal pilot two villages were

selected; in one village everyone received the benefit and in other village nobody received the money. The general pilot was in operation for 18 months whereas the tribal pilot was for 12 months only. Over 6000 individuals received the cash benefit from both the pilot (p. 10).

In the general pilot, a monthly payment of Rs.200 to adults and Rs.100 to children was made for initial one year which was increased to Rs.300 and Rs.150 respectively for rest of the months. In the tribal pilot, which ran for 12 months, Rs.300 and Rs.150 was given to adults and children respectively. For the general pilot, the transfer of benefit was done through Bank account for men and cooperative account for women in SEWA present villages. In case of non-SEWA villages, transfer was done through bank account for both men and women. The tribal pilot which only one village for the benefit, conducted cash payment (p. 11).

For the assessment of the impact of the pilot on living standard of recipients of the benefits, a Baseline survey (census) was conducted prior to the pilot to collect information on socio-economic condition of individuals, an Interim Evaluation survey (sample) to review the operation of the program was conducted during the pilot, a Final Evaluation survey (census) was conducted after the completion of the pilot to find out the outcomes of the pilot, and finally a Post Final Evaluation survey for comparative analysis of pre and post pilot socio economic condition of individuals in both type of villages (A little more, How much it is... Piloting Basic Income Transfers in Madhya Pradesh, India, 2014, pp. 86-90).

Accordoing the Report of SEWA, basic income enabled the recipients to improve their socio-economic condition in many ways. Sanitation facilities improved and 16% recipient household made changes to their toilets as against 10% non-recipient household. Building of new toilets by more than 7% of recipient as against 4% of non-recipient was reported. In case of tribal village,

no significant changes appeared. Access to water was more visible in tribal villages, where the recipients turn to have their own water source (mainly tubewell) for both household as well as irrigation purpose. The general pilot villages tend more towards public taps or hand pumps. Better and improved energy sources for cooking as well as lighting were reported due to basic income money.

The economic condition of the recipients was improved as the money was spent on productive asset creation. Nearly 21% of basic income recipient households in the general pilot reported an increase in income earning work or production, compared with just 9% of the control households. The tribal pilot also accounted for major improvement in productive asset which strengthened the economic life of the recipient. It resulted in increase in livestock accumulation, small livestock increased from 424 to 633 in number and large livestock increased from 259 to 323 between the baseline and FES. Irrigation was improved through significant increase in wells and ploughs which increased by 34% and 48% respectively. The expense of seeds and fertilizers consumption was met with the additional money. Increased economic activities actually resulted in increase in working hours for both men and women that rejected the criticism that basic income would induce laziness. Improved economic condition along with regular basic income helped reduce indebtedness which is by nature cyclical and inter-generational. This also altered the source of borrowing from moneylenders to friends or relatives, which reduced their exploitation.

Basic income along with associated economic activities had a favourable effect on food and nutrition aspect. In both the pilot, the food sufficiency was met through increased income which was significant for the vulnerable (mainly Schedule Caste and Schedule Tribe). The food basket changed and included fresh vegetables and milk. A major change was reported among the tribals

who tend to consume vegetables, pulses, eggs, fish, meat and other nutritious prduct. The nutrition standard as indicated by z-score (weight for age percentage) improved from 39% to 58% in general pilot village as against only 10% increase in control village. The improvement is more among the female children under the pilot than the control village, 25% in pilot village against 12% in control village. Health outcome also improved possibly attributed to food sufficiency and proper nutrition as well as consumption of medicare. In case of any illness, people tended more towards private hospitals rather than government hospitals which was based on their personal perceptions.

Finally, education aspect had the most positive impact of Basic income. The enrollment rate of women in secondary school was 66% in general pilot villages where as it was only 36% in control villages by the end of the pilot. The drop-out rate in tribal pilot village was reduced to just 3% as against 17% in control village. Families also could be able to afford educational expenses due to basic income. This schooling of children had an immediate effect on child labor which was reduced by 20% in general pilot villages as against 5% in control villages. The type of labor also shifted to own-account labor rather than going to someone else.

The Basic income pilot based on the principle of unconditionality had a positive impact on people. This pilot also dismissed the criticism that basic income would increase consumption of bad good (like alcohol). It also rejected the criticism that basic income induces laziness among the working people, on the other hand it increased the working hour by expanding economic activities.

Conclusion

This chapter deals with the international experiences of cash transfer scheme. It made the cases of some most well-known conditional and unconditional basic income experiments around the world. It outlined the impacts of financial support on a wide dimension of socio-economic living of the recipients. In most of the experiment the objectives were mainly poverty reduction and education and health aspects which need serious attention in developing countries and it found immense positive impacts in improving the objectives. When we look into the Indian scenario, the poverty rate is still high i.e 21.9 percent according to Planning commission report despite high growth as compare to other developing nation. The transfer in Namibia reduced food poverty rate to more than half from 76% ot only 37%. In Brazil 16% fall in poverty rate was attributed to Bosla Familia program. Again as seen in the case of Alaska, the transfer alone contributed to reduce the $2 per day poverty ratio to zero. Although developing countries might not carry out such higher level of transfer but still a moderate transfer would strengthen the economy through enhanced economic activities as seen in the case of India also. Basic income endorsed financial security which in one hand reduced indebtedness of the family and on the other hand increased the investment spending on productive assets which compounded their economic well-being. Similar results was also found in Namibian experiments where indebtedness was significantly reduced and productive investment increased their economic wellbeing.

Basic income also had positive impact on education aspects. As explained above , the policy debate in Brazil mostly focused on human capital formation as a way to break the inter-generational poverty and conditionalities were also based on enrollment requirement . This was also the case for Mexican Progresa .Both these program focused on education as the mechanism

to reduce long term poverty. In both cases the enrollment and attendance improved over time. This is true for Namibia and Indian case also. In India, the enrollment rate of women in secondary school was 66% in general pilot villages where as it was only 36% in control villages by the end of the pilot. When we look into India, there is a wide gap among states in terms of literacy rate. Some state have literacy rate more than 90% whereas some other states fall behind 60% and the gender gap in literacy rate is also significant in certain states. Thus a kind of transfer like this would definitely have a positive impact on literacy rate in India. Basic income is also attributed for improvement in health and malnutrition, empowerment of women and other dependent section. Basic income is therefore desirable in many directions.

Chapter 4

Cost estimation of Universal Basic Income

Implementing any program fundamentally depends upon desirability and affordability of the program which are deeply complementary to each other in the sense that "desirability without economic capacity to fund the program and affordability without the need for a program" can put down the entire program. Desirability of the program which in part includes the need and importance of a specific program at current scenario and what would be the impact on the target, has a greater social ramification. What would be the behavioural response of people to the new program and its future consequences? What governs the social desirability? These are some of the important questions that arise at the outset. In every developing country where economic capabilities are limited in some sphere, rolling out any programs certainly draws the question of affordability in the part of the government. Affordability of the programs simply means the fiscal space available to efficiently incur expenditure to carry out the program. When we look particularly into the Indian context, which holds the 6^{th} position of World ranking on Gross Domestic Product (GDP) with $2.6 Billion along with the World's second largest country with respect to total population, which makes it a low percapita income country, affordability of a program poses scarcity of funds. An expenditure outlay for such a massive country thus definitely requires a sound economic condition of the country. This chapter attempts to tentative estimates of the cost for providing basic income at different levels Purely as a heuristic exercise, which has considerable potential to take forward the basic income policy in public discourse.

Since, idea of basic income is a matter of contemplation of what society thinks basic to human beings in any given society, there is no specific threshold level of Basic Income. This chapter outlines a menu of possible levels of Basic Income. It also outlines different approach used to estimates poverty level in the country. Poverty reports by Tendulkar committee as well as Rangarajan committee have been extensively used for estimation of poor, poverty gap as well as setting up UBI amount. For estimation of the cost, the data for population size has been taken from Census Survey 2011. Poverty line and poverty ratio have been taken from Planning Commission of India. National Sample Survey (NSS, 2011-12) unit level data on Household Expenditure has been utilized to derive monthly consumption expenditure of household. Price indices have been taken from State CMIE database.

Setting the UBI Amount

Thus, for Universal Basic Income (UBI) to roll out which would unconditionally cover the total population of the country, it's necessary to carry out the cost analysis. To estimate the cost of UBI, the prime task is to set up a Basic Income level. "An ethically appealing basic income should be set at a level that provides the basis for a "modest but decent standard of life" (Pateman, Freedom and Democratization: Why Basic Income is to be Preferred to Basic Capital, 2003, p. 131). Philippe Van Parijs argues for a highest possible basic income considering economic and ecological effect, which implies the right level of basic income may be below or above the amount necessary to fulfill basic needs depending upon circumstances (Parijs P. v., 1995). "All the richer countries can now afford to pay a basic income above subsistence" (Parijs P. V., A Basic Income for All). Although they differ in setting different level of basic income,

meeting only basic needs or a highest sustainable level, their ultimate aim for basic income is to strengthen the social security of the country. If we look into the international explanation of a Basic Income for a developing nation, reduction of poverty has been one of major reason that call for such a program. The basic characteristic of poverty is failing in acquiring a "minimum living standard" which is predetermined by institutional factors. This minimum living standard itself is dynamic in nature but it should always cover food, clothing, shelter, education and health which are basic to human survival. So we can consider the "poverty threshold level" as the reference to set up Basic Income level. Below Poverty Line (BPL) which separates the poor from the non-poo, is the mechanism to estimate poverty level in India. An income amount set at BPL level would thus possibly ensure the objective of providing Basic Income.

The estimation of a BPL figure and corresponding poverty trend In India has been traditionally the task of Planning Commission of India. Planning Commission has so far set up many expert groups to formulate a methodology and estimate the trend the trend of poverty. Adoption of different methodologies have resulted in variation in BPL figure as well as corresponding poverty ratios. Expert group (Tendulkar) and Expert group (Rangarajan) are the two latest committees to submit report on poverty estimates. So taking these estimates separately, different amount of Basic Income can be calculated.

In the year 2005, Planning Commission formed an expert group under the chairmanship of Prof. Suresh Tendulkar to look into the validity of existing methods poverty calculation and suggest a new methodology as well as estimates for 2004-05. The existing methodology of poverty calculation was highly criticized on various grounds. The Tendulkar committee has given its report for 2004-05 year which is obtained from data provided by National Sample Survey (NSS)

round on household consumer expenditure. The main lines of departure of expert group from existing methodology

- With respect to recall period i.e a Mixed Reference Period (MRP) instead of a Uniform Reference Period (URP) where by expenditure for low frequency items are counted on 365 days basis and others are counted on 30 days basis.
- Moving away from a calorie norm to arrive at poverty level due to inappropriate relationship nutritional outcome.
- Incorporating health and education expenses in estimating poverty line which was earlier absent.
- MRP-equivalent all-India Urban Poverty Line Basket (PLB) as the reference PLB for both rural and urban population and again adjustment has been made for the within-state-rural-relative to urban and rural and urban state-relative-to-all-India price differentials (Report of the expert group to review the methodology for estimation of poverty, 2009).

Based on this methodology of poverty estimation, the all-India rural and urban poverty level was estimated to be Rs 27/ day and Rs 33/ day respectively with inter-state variation subject to price differentials for 2011-12 year. This means population below income (consumption) level of Rs 816 per month in rural and Rs 1000 per day in urban fall under poverty line for the period 2011-12 which could be adjusted for inter-state price differential to arrive at state wise poverty threshold level (Report of the expert group to review the methodology for estimation of poverty, 2009, p. 28).

Table 1a- provides the monthly poverty threshold level for rural and urban, state-wise as well as all-India basis for 2011-12 period based on inter-state price differential for rural and urban sector and percentage of population based on all-India below poverty line. The population weighted average of state-wise poverty ratio constructs the national poverty ratio.

Table 1a- State-wise BPL level, Percent and Percentage of people BPL 2011-12 (Tendulkar Methodology)

STATES	BPL LEVEL		PERCENTAGE OF PERSON BPL			NUMBER OF PERSON BPL(Lakhs)		
	Rural	Urban	Rural	Urban	Total	Rural	Urabn	Total
Andhra Pradesh	860	1009	11	5.8	9.2	61.8	17	78.8
Arunachal Pradesh	930	1060	38.9	20.3	34.7	4.2	0.7	4.9
Assam	828	1008	33.9	20.5	32	92.1	9.2	101.3
Bihar	778	923	34.1	31.2	33.7	320.4	37.8	358.2
Chhattisgarh	738	849	44.6	24.8	39.9	88.9	15.2	104.1
Goa	1090	1134	6.8	4.1	5.1	0.4	0.4	0.8
Gujarat	932	1152	21.5	10.1	16.6	75.4	26.9	102.2
Haryana	1015	1169	11.6	10.3	11.2	19.4	9.4	28.8
Himachal Pradesh	913	1064	8.5	4.3	8.1	5.3	0.3	5.6
Jammu & Kashmir	891	988	11.5	7.2	10.3	10.7	2.5	13.3
Jharkhand	748	974	40.8	24.8	37	104.1	20.2	124.3
Karnataka	902	1089	24.5	15.3	20.9	92.8	37	129.8
Kerala	1018	987	9.1	5	7.1	15.5	8.5	23.9
Madhya Pradesh	771	897	35.7	21	31.6	191	43.1	234.1
Maharashtra	967	1126	24.2	9.1	17.4	150.6	47.4	198
Manipur	1118	1170	38.8	32.6	36.9	7.4	2.8	10.2
Meghalaya	888	1154	12.5	9.3	11.9	3	0.6	3.6
Mizoram	1066	1155	35.4	6.4	20.4	1.9	0.4	2.3
Nagaland	1270	1302	19.9	16.5	18.9	2.8	1	3.8
Odisha	695	861	35.7	17.3	32.6	126.1	12.4	138.5
Punjab	1054	1155	7.7	9.2	8.3	13.4	9.8	23.2
Rajasthan	905	1002	16.1	10.7	14.7	84.2	18.7	102.9
Sikkim	930	1226	9.9	3.7	8.2	0.4	0.1	0.5
Tamil Nadu	880	937	15.8	6.5	11.3	59.2	23.4	82.6
Tripura	798	920	16.5	7.4	14	4.5	0.8	5.2
Uttar Pradesh	768	941	30.4	26.1	29.4	479.4	118.8	598.2
Uttarakhand	880	1082	11.6	10.5	11.3	8.2	3.4	11.6
West Bengal	783	981	22.5	14.7	20	141	44	185
A.& N.Islands	880	937	1.6	0	1	0.04	0	0.04
Chandigarh	1054	1155	1.6	22.3	21.8	0.004	2.3	2.3
D.& N.Haveli	967	1126	62.6	15.4	39.3	1.2	0.3	1.5
Daman & Diu	1090	1134	0	12.6	9.9	0	0.3	0.3
Delhi	1145	1134	12.9	9.8	9.9	0.5	16.5	17
Lakshadweep	1018	987	0	3.4	2.8	0	0.02	0.02
Puducherry	1301	1309	17.1	6.3	9.7	0.7	0.6	1.3
All-INDIA	816	1000	25.7	13.7	21.9	2166.6	531.2	2697.8

Source- Rangarajan Committee Report, Planning Commission of India

Cost of UBI (2011)-Using Tendulkar methodology

Basic Income in India as stated above if set at poverty alleviating level of income (by taking poverty leel of expenditure as a proxy for income), everyone would be provided with Rs 816 per month in rural and Rs 1000 per month in urban as per Tendulkar committee poverty report. The total cost of providing this level of Basic Income has been presented in table no-1b. The table has been calculated by estimating the yearly Basic Income amount multiplied by total population of the country as a whole and state-wise population also for both rural and urban separately. According to this estimates a total amount of Rs.12.75 lakh crores is required to roll out the plan of Basic Income at all India level which constitute 14.6% of GDP (at 2011-12 price). This estimate is based on population given by census survey 2011 and BPL level for 2011-12 period. Rolling out this model of Basic Income would reduce poverty level to zero at national level because everyone will be entitled to receive the benefits.

From the Table 1a comparing the State specific poverty line for both rural and urban with all-India level, upon which general poverty level is estimated, we can observe some states remain under poverty line despite having income level more than the all-India recommended level of income. For instance, when we consider the Rural sector- all the states whose state specific poverty line is above the all-India rural level, they fall under poverty line when inter-state price differential is imputed in poverty level estimation. This turns out that in both rural as well as urban sector 27 out of 35 which constitutes about 77% fall under poverty line under this module. Such an outcome is the result of inter-state price differential.

Thus inter-state price differential is a crucial factor in measuring poverty threshold level. So UBI to be effectively implemented, it's necessary to move away from all-India uniform level of Basic Income to state-specific and sector specific different level of Basic Income. State specific BPL level can be attained by incorporating inter-state price differential. This would reduce the

exclusion of certain percentage of people who could have been left out below poverty line if all-India level Basic Income is provided. Table 1c presents estimation of Basic Income for each state incorporating inter-state price differential. This has been arrived by multiplying the state-wise BPL level which also accounts for inter-state price differential, with corresponding population of the state. Rs. 13 lakh crores is the total outlay to fund Basic Income under this methodology which is 14.9 of GDP (at 2011-12 price).

Table 1b- Cost of UBI- All-India Basic,2011 (Tenduklar Methodology)

STATES	Population in 2011			Cost of UBI		
	Total	Rural	Urban	Rural (27/ day)	Urban (33/day)	TOTAL
Andhra Pradesh	84580777	56361702	28219075	555444573210	339898758375	895343331585
Arunachal Pradesh	1383727	1066358	317369	10508958090	3822709605	14331667695
Assam	31205576	26807034	4398542	264183320070	52980438390	317163758460
Bihar	104099452	92341436	11758016	910024851780	141625302720	1051650154500
Chhattisgarh	25545198	19607961	5937237	193236455655	71514019665	264750475320
Goa	1458545	551731	906814	5437309005	10922574630	16359883635
Gujarat	60439692	34694609	25745083	341915371695	310099524735	652014896430
Haryana	25351462	16509359	8842103	162699732945	106503130635	269202863580
Himachal Pradesh	6864602	6176050	688552	60864972750	8293608840	69158581590
Jammu & Kashmir	12541302	9108060	3433242	89759931300	41353399890	131113331190
Jharkhand	32988134	25055073	7933061	246917744415	95553719745	342471464160
Karnataka	61095297	37469335	23625962	369260296425	284574712290	653835008715
Kerala	33406061	17471135	15934926	172178035425	191936183670	364114219095
Madhya Pradesh	72626809	52557404	20069405	517953216420	241735983225	759689199645
Maharashtra	112374333	61556074	50818259	606635109270	612105929655	1218741038925
Manipur	2855794	2021640	834154	19923262200	10047384930	29970647130
Meghalaya	2966889	2371439	595450	23370531345	7172195250	30542726595
Mizoram	1097206	525435	571771	5178161925	6886981695	12065143620
Nagaland	1978502	1407536	570966	13871267280	6877285470	20748552750
Odisha	41974218	34970562	7003656	344634888510	84359036520	428993925030
Punjab	27743338	17344192	10399146	170927012160	125257713570	296184725730
Rajasthan	68548437	51500352	17048085	507535968960	205344183825	712880152785
Sikkim	610577	456999	153578	4503725145	1849847010	6353572155
Tamil Nadu	72147030	37229590	34917440	366897609450	420580564800	787478174250
Tripura	3673917	2712464	961453	26731332720	11580701385	38312034105
Uttar Pradesh	199812341	155317278	44495063	1530651774690	535943033835	2066594808525
Uttarakhand	10086292	7036954	3049338	69349181670	36729276210	106078457880
West Bengal	91276115	62183113	29093002	612814578615	350425209090	963239787705
A.& N.Islands	380581	237093	143488	2336551515	1728312960	4064864475
Chandigarh	1055450	28991	1026459	285706305	12363698655	12649404960
D.& N.Haveli	343709	183114	160595	1804588470	1934366775	3738955245
Daman & Diu	243247	60396	182851	595202580	2202440295	2797642875
Delhi	16787941	419042	16368899	4129658910	197163388455	201293047365
Lakshadweep	64473	14141	50332	139359555	606248940	745608495
Puducherry	1247953	395200	852753	3894696000	10271409885	14166105885
INDIA	1210854977	833748852	377106125	8216594936460	4542243275625	12758838212085

Source- Estimation from Census Survey,2011

Table-1c State Specific UBI, 2011 (Tendulkar Methodology)

	BPL LEVEL		TOTAL POPULATION		COST OF UBI		
STATES	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	TOTAL
Andhra Pradesh	860	1009	56361702	28219075	581652764640	341676560100	923329324740
Arunachal Pradesh	930	1060	1066358	317369	11900555280	4036933680	15937488960
Assam	828	1008	26807034	4398542	266354689824	53204764032	319559453856
Bihar	778	923	92341436	11758016	862099646496	130231785216	992331431712
Chhattisgarh	738	849	19607961	5937237	173648102616	60488570556	234136673172
Goa	1090	1134	551731	906814	7216641480	12339924912	19556566392
Gujarat	932	1152	34694609	25745083	388024507056	355900027392	743924534448
Haryana	1015	1169	16509359	8842103	201083992620	124037020884	325121013504
Himachal Pradesh	913	1064	6176050	688552	67664803800	8791431936	76456235736
Jammu & Kashmir	891	988	9108060	3433242	97383377520	40704517152	138087894672
Jharkhand	748	974	25055073	7933061	224894335248	92721616968	317615952216
Karnataka	902	1089	37469335	23625962	405568082040	308744071416	714312153456
Kerala	1018	987	17471135	15934926	213427385160	188733263544	402160648704
Madhya Pradesh	771	897	52557404	20069405	486261101808	216027075420	702288177228
Maharashtra	967	1126	61556074	50818259	714296682696	686656315608	1400952998304
Manipur	1118	1170	2021640	834154	27122322240	11711522160	38833844400
Meghalaya	888	1154	2371439	595450	25270053984	8245791600	33515845584
Mizoram	1066	1155	525435	571771	6721364520	7924746060	14646110580
Nagaland	1270	1302	1407536	570966	21450848640	8920772784	30371621424
Odisha	695	861	34970562	7003656	291654487080	72361773792	364016260872
Punjab	1054	1155	17344192	10399146	219369340416	144132163560	363501503976
Rajasthan	905	1002	51500352	17048085	559293822720	204986174040	764279996760
Sikkim	930	1226	456999	153578	5100108840	2259439536	7359548376
Tamil Nadu	880	937	37229590	34917440	393144470400	392611695360	785756165760
Tripura	798	920	2712464	961453	25974555264	10614441120	36588996384
Uttar Pradesh	768	941	155317278	44495063	1431404034048	502438251396	1933842285444
Uttarakhand	880	1082	7036954	3049338	74310234240	39592604592	113902838832
West Bengal	783	981	62183113	29093002	584272529748	342482819544	926755349292
A.& N.Islands	880	937	237093	143488	2503702080	1613379072	4117081152
Chandigarh	1054	1155	28991	1026459	366678168	14226721740	14593399908
D.& N.Haveli	967	1126	183114	160595	2124854856	2169959640	4294814496
Daman & Diu	1090	1134	60396	182851	789979680	2488236408	3278216088
Delhi	1145	1134	419042	16368899	5757637080	222747977592	228505614672
Lakshadweep	1018	987	14141	50332	172746456	596132208	768878664
Puducherry	1301	1309	395200	852753	6169862400	13395044124	19564906524
ALL-INDIA					8384450301144	4629813525144	13014263826288

Source- Estimation from Census Survey,2011

Cost of UBI for Current Period (2018-19)

The above threshold limit of BPL pertains to the year 2011-12 which could be inflated at yearly average inflation rate to derive the BPL for 2018-19. The change in price level during 2011-12 to 2018-19, can be calculated from increase in prices of poverty line basket considered for calculation of poverty. Year to year changes in consumer price indices with base year 2012, has been borrowed from CMIE data on all-India as well as state specific inflation rate for 2015-16, 2016-17 and 2017-18 and an yearly average inflation rate has been calculated and added to the consumption level of 2011-12 separately for both rural and urban sector and new consumption level for 2018-19 has been arrived. This new consumption level is the threshold poverty line for 2018-19. According to the new estimates, all-India BPL is Rs.1127 for rural and Rs.1307 for urban per month which comes to Rs.37 and Rs.44 per day for all-India rural and urban respectively. State specific BPL for 2018-19 has been shown in table 1d.

So if Basic Income is to be set at BPL level for the current year (2018-19), which would ideally be the poverty eradicating level, a yearly amount of Rs.13,505 and Rs.16,060 is required per person for rural and urban sectors, respectively. For the estimation of total cost of providing this level Basic Income, the population has been derived from Census 2011 data and yearly average population growth has been incorporated to arrive at expected population for the year 2018-19. The yearly average population growth rate data has been calculated from World Bank Estimates of population growth rate for the year 2015, 2016 and 2017. A yearly average growth rate at 1.15 percent for 121 crores (approx.) population in 2011, is projected to increase the population to 131 crores (approx.) in 2018. Increase in population for each state and all-India is presented in table 1e.

Table-1d State-wise Below Poverty Line for 2018-19 (Tendulkar Methodology)

TENDULKAR	2011-12 LINE		Average Inflation Rate		2018-19 line	
STATES	RURAL	URBAN	Rural	Urban	Rural New	Urban New
Andhra Pradesh	860	1009	6.01%	4.20%	1294	1,346
Arunachal Pradesh	930	1060	5.82%	3.28%	1382	1,329
Assam	828	1008	4.13%	3.28%	1099	1,264
Bihar	778	923	3.79%	3.04%	1009	1,139
Chhattisgarh	738	849	4.64%	3.78%	1014	1,101
Goa	1090	1134	5.88%	3.67%	1626	1,459
Gujarat	932	1152	5.56%	3.18%	1361	1,435
Haryana	1015	1169	4.53%	3.78%	1384	1,516
Himachal Pradesh	913	1064	4.66%	3.88%	1256	1,389
Jammu & Kashmir	891	988	7.17%	3.91%	1447	1,293
Jharkhand	748	974	5.66%	3.30%	1100	1,223
Karnataka	902	1089	5.28%	4.24%	1293	1,456
Kerala	1018	987	5.04%	4.44%	1436	1,338
Madhya Pradesh	771	897	3.50%	3.60%	981	1,149
Maharashtra	967	1126	5.91%	3.43%	1445	1,425
Manipur	1118	1170	11.79%	3.68%	2440	1,506
Meghalaya	888	1154	3.24%	3.13%	1110	1,432
Mizoram	1066	1155	2.25%	2.98%	1246	1,419
Nagaland	1270	1302	5.41%	3.85%	1836	1,696
Odisha	695	861	4.97%	3.34%	976	1,083
Punjab	1054	1155	4.39%	3.18%	1424	1,438
Rajasthan	905	1002	4.84%	4.66%	1260	1,379
Sikkim	930	1226	7.84%	5.14%	1577	1,741
Tamil Nadu	880	937	5.10%	4.65%	1246	1,288
Tripura	798	920	3.69%	2.51%	1028	1,094
Uttar Pradesh	768	941	3.47%	3.78%	975	1,220
Uttarakhand	880	1082	3.62%	3.60%	1128	1,386
West Bengal	783	981	4.35%	3.70%	1055	1,265
A.& N.Islands	880	937	6.51%	4.30%	1368	1,258
Chandigarh	1054	1155	5.54%	3.67%	1537	1,486
D.& N.Haveli	967	1126	6.17%	3.72%	1471	1,454
Daman & Diu	1090	1134	9.34%	3.13%	2036	1,407
Delhi	1145	1134	4.35%	5.00%	1543	1,596
Lakshadweep	1018	987	3.61%	3.94%	1305	1,294
Puducherry	1301	1309	4.05%	4.00%	1718	1,723
All-India	816	1000	4.72%	3.90%	1127	1,307

Table-1e Projected Population for 2018 with 1.15 % Annual Growth Rate

States	Population in 2018 as Average growth of 1.15%		
	Total	Rural	Urban
INDIA	1311756851	903226058	408530792
Andhra Pradesh	91628986	61058384	30570601
Arunachal Pradesh	1499034	1155219	343816
Assam	33805971	29040894	4765077
Bihar	112774174	100036349	12737824
Chhattisgarh	27673907	21241914	6431993
Goa	1580087	597707	982380
Gujarat	65476198	37585749	27890449
Haryana	27464027	17885102	9578925
Himachal Pradesh	7436637	6690707	745930
Jammu & Kashmir	13586382	9867045	3719338
Jharkhand	35737071	27142940	8594132
Karnataka	66186435	40591696	25594739
Kerala	36189825	18927024	17262801
Madhya Pradesh	78678881	56937070	21741811
Maharashtra	121738609	66685609	55053000
Manipur	3093770	2190105	903665
Meghalaya	3214123	2569054	645070
Mizoram	1188637	569220	619417
Nagaland	2143373	1524828	618545
Odisha	45471976	37884697	7587278
Punjab	30055221	18789503	11265718
Rajasthan	74260653	55791933	18468721
Sikkim	661457	495081	166376
Tamil Nadu	78159121	40331973	37827149
Tripura	3980069	2938497	1041572
Uttar Pradesh	216462923	168260037	48202885
Uttarakhand	10926794	7623351	3303443
West Bengal	98882254	67364900	31517354
A.& N.Islands	412295	256850	155445
Chandigarh	1143402	31407	1111995
D.& N.Haveli	372351	198373	173978
Daman & Diu	263517	65429	198088
Delhi	18186899	453961	17732937
Lakshadweep	69846	15319	54526
Puducherry	1351946	428132	923814

Based on the current methodology, the calculation of cost of providing Basic Income considers the new BPL level as arrived by incorporating the price inflation level for all-India as well as state-wise and new population size as arrived by implicating the average population growth. Table 1f presents the total cost of providing Basic Income at all-India BPL level, estimated separately for rural and urban sector for the period 2018-19. This estimate considered the new population size (that include average population growth till the period) and rise in inflation to estimate new BPL for 2018-19 period. The estimated cost of providing this level of Basic Income stands at Rs. 18.75 lakh crores which is 13.3 % of estimated GDP for 2018-19 .

As stated earlier providing an all-India BPL level Basic Income leaves out certain state below BPL when inter-state price differential is considered in the estimation. Table 1g presents the state specific estimates of Basic Income for the period 2018-19. In this methodology the total cost of Basic Income increases to Rs. 19 lakh crore which is 13.5% of estimated GDP for 2018-19. Here we can observe that there is an increase in total cost if state specific Basic Income is roll out instead of an uniform level at all-India basis.

Table-1f Cost of UBI all-India basis, 2018-19 (Tendulkar methodology)

States	Population in 2018 as Average growth of 1.15%			COST OF UBI		
	Total	Rural	Urban	Rural (37/day)	Urban(44/day)	Total
INDIA	1311756851	903226058	408530792	12198067919692	6561004520936	18759072440628
Andhra Pradesh	91628986	61058384	30570601	824593482097	490963859714	1315557341811
Arunachal Pradesh	1499034	1155219	343816	15601229650	5521680253	21122909904
Assam	33805971	29040894	4765077	392197267406	76527141922	468724409328
Bihar	112774174	100036349	12737824	1350990895433	204569459415	1555560354848
Chhattisgarh	27673907	21241914	6431993	286872047225	103297815168	390169862393
Goa	1580087	597707	982380	8072037755	15777019675	23849057430
Gujarat	65476198	37585749	27890449	507595537930	447920611088	955516149017
Haryana	27464027	17885102	9578925	241538302463	153837537795	395375840258
Himachal Pradesh	7436637	6690707	745930	90357998329	11979632484	102337630812
Jammu & Kashmir	13586382	9867045	3719338	133254437748	59732565424	192987003173
Jharkhand	35737071	27142940	8594132	366565400904	138021754714	504587155618
Karnataka	66186435	40591696	25594739	548190851645	411051513665	959242365309
Kerala	36189825	18927024	17262801	255609457036	277240581883	532850038919
Madhya Pradesh	78678881	56937070	21741811	768935132129	349173477194	1118108609323
Maharashtra	121738609	66685609	55053000	900589151902	884151184352	1784740336253
Manipur	3093770	2190105	903665	29577374494	14512859384	44090233878
Meghalaya	3214123	2569054	645070	34695069049	10359816198	45054885246
Mizoram	1188637	569220	619417	7687317112	9947841913	17635159025
Nagaland	2143373	1524828	618545	20592795644	9933836284	30526631927
Odisha	45471976	37884697	7587278	511632836966	121851690102	633484527068
Punjab	30055221	18789503	11265718	253752231887	180927435002	434679666889
Rajasthan	74260653	55791933	18468721	753470052855	296607653239	1050077706094
Sikkim	661457	495081	166376	6686071984	2671995721	9358067705
Tamil Nadu	78159121	40331973	37827149	544683289642	607504006199	1152187295840
Tripura	3980069	2938497	1041572	39684396593	16727645248	56412041841
Uttar Pradesh	216462923	168260037	48202885	2272351801866	774138339711	3046490141577
Uttarakhand	10926794	7623351	3303443	102953356558	53053289452	156006646010
West Bengal	98882254	67364900	31517354	909762974800	506168701581	1415931676382
A.& N.Islands	412295	256850	155445	3468762218	2496446900	5965209118
Chandigarh	1143402	31407	1111995	424149534	17858638969	18282788503
D.& N.Haveli	372351	198373	173978	2679028587	2794079574	5473108161
Daman & Diu	263517	65429	198088	883616821	3181296081	4064912902
Delhi	18186899	453961	17732937	6130746405	284790973209	290921719614
Lakshadweep	69846	15319	54526	206888295	875691106	1082579401
Puducherry	1351946	428132	923814	5781928731	14836450318	20618379049

Table-1g State Specific Cost for 2018 -19 (Tendulkar Methodology)

	2018-19 Poverty line		Population 2018		State Specific UBI cost		
STATES	Rural	Urban	Rural	Urban	Rural	Urban	Total
Andhra Pradesh	1294	1346	61058384	30570601	948097165076	493796125376	1441893290452
Arunachal Pradesh	1382	1329	1155219	343816	19155907717	5483079526	24638987242
Assam	1099	1264	29040894	4765077	382961679155	72264241984	455225921140
Bihar	1009	1139	100036349	12737824	1211461519348	174027346321	1385488865669
Chhattisgarh	1014	1101	21241914	6431993	258413601542	84943969060	343357570603
Goa	1626	1459	597707	982380	11665129774	17200761216	28865890990
Gujarat	1361	1435	37585749	27890449	613790322938	480126974930	1093917297868
Haryana	1384	1516	17885102	9578925	297047131099	174263263881	471310394980
Himachal Pradesh	1256	1389	6690707	745930	100829856581	12432097703	113261954284
Jammu & Kashmir	1447	1293	9867045	3719338	171300510694	57690293918	228990804612
Jharkhand	1100	1223	27142940	8594132	358269531722	126107975469	484377507192
Karnataka	1293	1456	40591696	25594739	629723438045	447201694538	1076925132584
Kerala	1436	1338	18927024	17262801	326207802702	277126273275	603334075976
Madhya Pradesh	981	1149	56937070	21741811	670213525611	299769665842	969983191454
Maharashtra	1445	1425	66685609	55053000	1156386297916	941734161986	2098120459902
Manipur	2440	1506	2190105	903665	64120872166	16335849880	80456722046
Meghalaya	1110	1432	2569054	645070	34229574781	11083800200	45313374981
Mizoram	1246	1419	569220	619417	8508673827	10544276281	19052950108
Nagaland	1836	1696	1524828	618545	33603025500	12589520626	46192546126
Odisha	976	1083	37884697	7587278	443795391932	98639656808	542435048739
Punjab	1424	1438	18789503	11265718	321104575941	194441512655	515546088596
Rajasthan	1260	1379	55791933	18468721	843697911345	305525676277	1149223587622
Sikkim	1577	1741	495081	166376	9371299297	3476464047	12847763344
Tamil Nadu	1246	1288	40331973	37827149	603164779652	584654196063	1187818975714
Tripura	1028	1094	2938497	1041572	36255151199	13677980387	49933131586
Uttar Pradesh	975	1220	168260037	48202885	1968460260559	705890297614	2674350558173
Uttarakhand	1128	1386	7623351	3303443	103232669736	54952997004	158185666740
West Bengal	1055	1265	67364900	31517354	852944868996	478573903412	1331518772408
A.& N.Islands	1368	1258	256850	155445	4217708420	2346863269	6564571690
Chandigarh	1537	1486	31407	1111995	579383191	19835252655	20414635846
D.& N.Haveli	1471	1454	198373	173978	3501052682	3034958244	6536010926
Daman & Diu	2036	1407	65429	198088	1598934293	3345385981	4944320274
Delhi	1543	1596	453961	17732937	8405233440	339547136941	347952370381
Lakshadweep	1305	1294	15319	54526	239927415	846603923	1086531338
Puducherry	1718	1723	428132	923814	8825336634	19095838515	27921175148
All-India					12505380050923	6542606095809	19047986146732

In the year 2012, Dr.C.Rangarajan was appointed to lead a research group to review the Tendulkar committee methodology of poverty estimation. A call for review of this approach was made because of the criticism on poverty line basket used by Expert group (Tendulkar) which did not comply with changing time and living standard of the people. Planning Commission announced to include housing, education and health expenditures into the poverty level of expenditure. Subsequently the task is given to the Committee of Expert group headed by Rangarajan, they submitted their report on the estimates of poverty for 2011-12 year on June 2014. The major line of departure of Expert group (Rangarajan) from Expert group (Tendulkar) are;

- For Tendulkar committee All-India urban poverty line basket was the reference for poverty line basket for both rural and urban poverty estimation state wise as well as all-India. Expert group (Rangarajan) included separate poverty line basket for rural and urban which was in line with earlier poverty line basket.
- Calorie norm of food components was again introduced in estimating poverty.
- Expert group (Rangarajan) considered Modified Mixed Reference Period (MMRP) instead of Mixed Reference Period (MRP) as used by Expert group (Tendulkar) (Report of the expert group to review the methodology for measurement of poverty, 2014).

Incorporating inter-state price differential separately for rural and urban, state wise as well as all-India poverty line has been estimated for both rural and urban sector for 2011-12 which is presented in Table 2a. The estimation for state-specific poverty ratios in rural and urban areas for the year 2011-12 is done from the state-specific poverty lines. The state-specific distribution of

persons by expenditure groups MMRP has been derived from the NSS 68th Round (2011-12) on household consumer expenditure of NSSO. An average (population weighted) of state-wise poverty ratios provide the national poverty ratio. Thus all-India BPL stands at Rs.972 for rural and Rs.1407 for urban, people failing to avail this level of income will be declared poor.

Table 2a- State-wise BPL level, Percent and Percentage of people BPL 2011-12 (Rangarajan Methodology)

STATES	BPL LEVEL		PERCENTAGE OF PERSON BPL			NUMBER OF PERSON BPL(Lakhs)		
	Rural	Urban	Rural	Urban	Total	Rural	Urban	Total
Andhra Pradesh	1032	1371	12.7	15.6	13.7	71.5	45.7	117.3
Arunachal Pradesh	1151	1483	39.3	30.9	37.4	4.3	1	5.3
Assam	1007	1420	42	34.2	40.9	114.1	15.4	129.5
Bihar	971	1229	40.1	50.8	41.3	376.8	61.4	438.2
Chhattisgarh	912	1230	49.2	43.7	47.9	97.9	26.9	124.8
Goa	1201	1470	1.4	9.1	6.3	0.1	0.8	0.9
Gujarat	1103	1507	31.4	22.2	27.4	109.8	58.9	168.8
Haryana	1128	1528	11	15.3	12.5	18.4	14	32.4
Himachal Pradesh	1067	1412	11.1	8.8	10.9	6.9	0.6	7.5
Jammu & Kashmir	1044	1403	12.6	21.6	15.1	11.7	7.6	19.3
Jharkhand	904	1272	45.9	31.3	42.4	117	25.5	142.5
Karnataka	975	1373	19.8	25.1	21.9	74.8	6.9	135.7
Kerala	1054	1354	7.3	15.3	11.3	12.3	26	38.3
Madhya Pradesh	942	1340	45.2	42.1	44.3	241.4	86.3	327.8
Maharashtra	1078	1560	22.5	17	20	139.9	88.4	228.3
Manipur	1185	1562	34.9	73.4	46.7	6.7	6.3	12.9
Meghalaya	1111	1524	26.3	16.7	24.4	6.4	1	7.4
Mizoram	1231	1704	33.7	21.5	27.4	1.8	1.2	3
Nagaland	1230	1615	6.1	32.1	14	0.8	1.9	2.8
Odisha	876	1205	47.8	36.3	45.9	169	26	195
Punjab	1127	1479	7.4	17.6	11.3	12.9	18.7	31.6
Rajasthan	1036	1406	21.4	22.5	21.7	112	39.5	151.5
Sikkim	1126	1543	20	11.7	17.8	0.9	0.2	1.1
Tamil Nadu	1082	1380	24.3	20.3	22.4	91.1	72.8	163.9
Tripura	936	1377	22.5	31.3	24.9	6.1	3.2	9.3
Uttar Pradesh	890	1330	38.1	45.7	39.8	600.9	208.2	809.1
Uttarakhand	1015	1408	12.6	29.5	17.8	8.9	9.4	18.4
West Bengal	934	1373	30.1	29	29.7	188.6	86.8	275.4
A.& N.Islands	1315	1798	6.6	4.9	6	0.2	0.1	0.3
Chandigarh	1303	1481	12	21.5	21.3	0.03	2.3	2.3
D.& N.Haveli	1008	1541	55.2	15.3	35.6	1	0.3	1.3
Daman & Diu	1200	1435	0	7.9	6.5	0	0.14	0.16
Delhi	1492	1539	11.9	15.7	15.6	0.5	26.3	26.7
Lakshadweep	1327	1459	0.6	7.9	6.5	0	0.04	0.04
Puducherry	1130	1382	5.9	4.9	6	0.2	0.1	0.2
INIDA	972	1407	30.9	26.4	29.5	2605.2	1024.7	3629.9

Source- Rangarajan committee report, Planning Commission of India

Cost of UBI (2011) –Using Rngarajan Methodology

As calculated above, the poverty line recommended by Rangarajan committee lies above the recommended level by Tendulkar committee. Basic Income to cover this new level of BPL has been shown in table 2b. The table has been calculated by multiplying the rural and urban BPL threshold level with total population and state-wise as well. According to Rangarajan committee level, a yearly transfer of Rs.11680 in rural and Rs.17155 in urban is required to fund the Basic Income transfer India. The total cost for funding this level of Basic Income stands at Rs. 16.20 lakh crore which is 18.5% of GDP of that year.

As we observe the Table 2a, the poverty line of each state is different from each other as well as all-India level due to inter-state price differential. The poverty line in some states is much higher than the all-India level and accordingly for some state it falls much below the all-India level, both for rural sector as well as urban sector. In both rural as well as urban sector 27 out of 35 states (constitutes about 77%) have a higher BPL level than National average. The difference in purchasing power of money in different region would undermine the benefit of providing Basic Income if it's set at all-India level. Certain states will get more benefit than required and some other states will be at a loss. It's thus desirable to provide different level of Basic Income taking into consideration the inter-state price differential. A state specific estimation of total cost of Basic Income has been presented in table 2c. The estimates have been arrived by multiplying state specific poverty line with the population (rural and urban separately. In this methodology the total cost to cover Basic Income is Rs.16.21 lakh crore which is 18.5% of GDP of that year. Both these estimates correspond to the 2011-12 period.

Table 2b Cost of UBI All-India Basis for 2011 (Rangarajan methodology)

STATES	Population in 2011			Cost of UBI		
	Total	Rural	Urban	Rural (32/day)	Urban (47/day)	Total
Andhra Pradesh	84580777	56361702	28219075	658304679360	484098231625	1142402910985
Arunachal Pradesh	1383727	1066358	317369	12455061440	5444465195	17899526635
Assam	31205576	26807034	4398542	313106157120	75456988010	388563145130
Bihar	104099452	92341436	11758016	1078547972480	201708764480	1280256736960
Chhattisgarh	25545198	19607961	5937237	229020984480	101853300735	330874285215
Goa	1458545	551731	906814	6444218080	15556394170	22000612250
Gujarat	60439692	34694609	25745083	405233033120	441656898865	846889931985
Haryana	25351462	16509359	8842103	192829313120	151686276965	344515590085
Himachal Pradesh	6864602	6176050	688552	72136264000	11812109560	83948373560
Jammu & Kashmir	12541302	9108060	3433242	106382140800	58897266510	165279407310
Jharkhand	32988134	25055073	7933061	292643252640	136091661455	428734914095
Karnataka	61095297	37469335	23625962	437641832800	405303378110	842945210910
Kerala	33406061	17471135	15934926	204062856800	273363655530	477426512330
Madhya Pradesh	72626809	52557404	20069405	613870478720	344290642775	958161121495
Maharashtra	112374333	61556074	50818259	718974944320	871787233145	1590762177465
Manipur	2855794	2021640	834154	23612755200	14309911870	37922667070
Meghalaya	2966889	2371439	595450	27698407520	10214944750	37913352270
Mizoram	1097206	525435	571771	6137080800	9808731505	15945812305
Nagaland	1978502	1407536	570966	16440020480	9794921730	26234942210
Odisha	41974218	34970562	7003656	408456164160	120147718680	528603882840
Punjab	27743338	17344192	10399146	202580162560	178397349630	380977512190
Rajasthan	68548437	51500352	17048085	601524111360	292459898175	893984009535
Sikkim	610577	456999	153578	5337748320	2634630590	7972378910
Tamil Nadu	72147030	37229590	34917440	434841611200	599008683200	1033850294400
Tripura	3673917	2712464	961453	31681579520	16493726215	48175305735
Uttar Pradesh	199812341	155317278	44495063	1814105807040	763312805765	2577418612805
Uttarakhand	10086292	7036954	3049338	82191622720	52311393390	134503016110
West Bengal	91276115	62183113	29093002	726298759840	499090449310	1225389209150
A.& N.Islands	380581	237093	143488	2769246240	2461536640	5230782880
Chandigarh	1055450	28991	1026459	338614880	17608904145	17947519025
D.& N.Haveli	343709	183114	160595	2138771520	2755007225	4893778745
Daman & Diu	243247	60396	182851	705425280	3136808905	3842234185
Delhi	16787941	419042	16368899	4894410560	280808462345	285702872905
Lakshadweep	64473	14141	50332	165166880	863445460	1028612340
Puducherry	1247953	395200	852753	4615936000	14628977715	19244913715
INDIA	1210854977	833748852	377106125	9738186591360	6469255574375	16207442165735

Table 2c- State Specific Cost of UBI 2011 (Rangarajan Methodology)

	BPL LEVEL		TOTAL POPULATION		COST OF UBI		
STATES	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	TOTAL
Andhra Pradesh	1032	1371	56361702	28219075	697983317568	464260221900	1162243539468
Arunachal Pradesh	1151	1483	1066358	317369	14728536696	5647898724	20376435420
Assam	1007	1420	26807034	4398542	323936198856	74951155680	398887354536
Bihar	971	1229	92341436	11758016	1075962412272	173407219968	1249369632240
Chhattisgarh	912	1230	19607961	5937237	214589525184	87633618120	302223143304
Goa	1201	1470	551731	906814	7951547172	15996198960	23947746132
Gujarat	1103	1507	34694609	25745083	459217844724	465574080972	924791925696
Haryana	1128	1528	16509359	8842103	223470683424	162128800608	385599484032
Himachal Pradesh	1067	1412	6176050	688552	79078144200	11666825088	90744969288
Jammu & Kashmir	1044	1403	9108060	3433242	114105775680	57802062312	171907837992
Jharkhand	904	1272	25055073	7933061	271797431904	121090243104	392887675008
Karnataka	975	1373	37469335	23625962	438391219500	389261349912	827652569412
Kerala	1054	1354	17471135	15934926	220974915480	258910677648	479885593128
Madhya Pradesh	942	1340	52557404	20069405	594108894816	322716032400	916824927216
Maharashtra	1078	1560	61556074	50818259	796289373264	951317808480	1747607181744
Manipur	1185	1562	2021640	834154	28747720800	15635382576	44383103376
Meghalaya	1111	1524	2371439	595450	31616024748	10889589600	42505614348
Mizoram	1231	1704	525435	571771	7761725820	11691573408	19453299228
Nagaland	1230	1615	1407536	570966	20775231360	11065321080	31840552440
Odisha	876	1205	34970562	7003656	367610547744	101272865760	468883413504
Punjab	1127	1479	17344192	10399146	234562852608	184564043208	419126895816
Rajasthan	1036	1406	51500352	17048085	640252376064	287635290120	927887666184
Sikkim	1126	1543	456999	153578	6174970488	2843650248	9018620736
Tamil Nadu	1082	1380	37229590	34917440	483388996560	578232806400	1061621802960
Tripura	936	1377	2712464	961453	30466395648	15887049372	46353445020
Uttar Pradesh	890	1330	155317278	44495063	1658788529040	710141205480	2368929734520
Uttarakhand	1015	1408	7036954	3049338	85710099720	51521614848	137231714568
West Bengal	934	1373	62183113	29093002	696948330504	479336300952	1176284631456
A.& N.Islands	1315	1798	237093	143488	3741327540	3095897088	6837224628
Chandigarh	1303	1481	28991	1026459	453303276	18242229348	18695532624
D.& N.Haveli	1008	1541	183114	160595	2214946944	2969722740	5184669684
Daman & Diu	1200	1435	60396	182851	869702400	3148694220	4018396620
Delhi	1492	1539	419042	16368899	7502527968	302300826732	309803354700
Lakshadweep	1327	1459	14141	50332	225181284	881212656	1106393940
Puducherry	1130	1382	395200	852753	5358912000	14142055752	19500967752
ALL INDIA					9845755523256	6367861525464	16213617048720

Cost of UBI for the Current Period (2018-19)

As explained above, to calculate the state-wise poverty line for the year 2018-19, the rise in general price index during period 2011-12 to 2018-19 has to be included for the preferred poverty line basket. The CMIE dataset on inflation rate separately for rural and urban is included to state-wise consumption line for 2011-12 to get new consumption line for 2018-19 as presented in table 2d. The earlier all-India rural poverty line and urban poverty line rose to Rs.1342 and Rs.1839 form Rs.972 and Rs.1407 respectively. Based on this poverty line, Rs.45 per day in rural and Rs.61 per day in urban sector are the new income level to be considered poor or non-poor as per methodology given by expert groups (Rangarajan).

Basic Income set at poverty eliminating level, taking Expert group (Rangarajan) estimate of BPL, would be Rs.16425 per person per year for rural and Rs.22,265 per person per year for urban. The estimation has been arrived by multiplying the yearly amount needed per person per year with total population (separately for rural and urban) for all India. It also shows the share of each state in the distribution of Basic Income depending upon their population size. The population size for the estimates is drawn from Table 1e. The total cost for providing this level of Basic Income has been estimated for all-India (rural and urban separately) along with for all the states in Table 2e. A total amount of Rs.23.93 lakh crore is required for implementation of Basic Income under this methodology for 2018-19 which is 17% of estimated GDP for 2018-19.

Table 2d-State-wise BPL_ for 2018-19 (Rangarajan Methodology)

RANGARAJAN	2011-12 LINE		AVERAGE INFLATION RATE		2018-19 LINE	
STATES	RURAL	URBAN	Rural	Urban	Rural	Urban
Andhra Pradesh	1032	1371	6.01%	4.20%	1,553	1,829
Arunachal Pradesh	1151	1483	5.82%	3.28%	1,710	1,859
Assam	1007	1420	4.13%	3.28%	1,336	1,780
Bihar	971	1229	3.79%	3.04%	1,260	1,516
Chhattisgarh	912	1230	4.64%	3.78%	1,253	1,594
Goa	1201	1470	5.88%	3.67%	1,792	1,891
Gujarat	1103	1507	5.56%	3.18%	1,611	1,877
Haryana	1128	1528	4.53%	3.78%	1,538	1,982
Himachal Pradesh	1067	1412	4.66%	3.88%	1,468	1,843
Jammu & Kashmir	1044	1403	7.17%	3.91%	1,695	1,836
Jharkhand	904	1272	5.66%	3.30%	1,329	1,597
Karnataka	975	1373	5.28%	4.24%	1,397	1,836
Kerala	1054	1354	5.04%	4.44%	1,487	1,835
Madhya Pradesh	942	1340	3.50%	3.60%	1,198	1,716
Maharashtra	1078	1560	5.91%	3.43%	1,611	1,975
Manipur	1185	1562	11.79%	3.68%	2,586	2,011
Meghalaya	1111	1524	3.24%	3.13%	1,389	1,891
Mizoram	1231	1704	2.25%	2.98%	1,438	2,093
Nagaland	1230	1615	5.41%	3.85%	1,779	2,104
Odisha	876	1205	4.97%	3.34%	1,230	1,516
Punjab	1127	1479	4.39%	3.18%	1,523	1,842
Rajasthan	1036	1406	4.84%	4.66%	1,443	1,934
Sikkim	1126	1543	7.84%	5.14%	1,910	2,192
Tamil Nadu	1082	1380	5.10%	4.65%	1,532	1,897
Tripura	936	1377	3.69%	2.51%	1,206	1,638
Uttar Pradesh	890	1330	3.47%	3.78%	1,130	1,725
Uttarakhand	1015	1408	3.62%	3.60%	1,302	1,804
West Bengal	934	1373	4.35%	3.70%	1,259	1,771
A.& N.Islands	1315	1798	6.51%	4.30%	2,045	2,414
Chandigarh	1303	1481	5.54%	3.67%	1,900	1,906
D.& N.Haveli	1008	1541	6.17%	3.72%	1,533	1,989
Daman & Diu	1200	1435	9.34%	3.13%	2,242	1,781
Delhi	1492	1539	4.35%	5.00%	2,011	2,166
Lakshadweep	1327	1459	3.61%	3.94%	1,701	1,913
Puducherry	1130	1382	4.05%	4.00%	1,492	1,819
ALL INDIA	972	1407	4.72%	3.90%	1,342	1,839

Table-2e Cost of UBI All India Basis 2018-19 (Rangarajan Methodology)

States	Population in 2018 as Average growth of 1.15%			COST OF UBI		
	Total	Rural	Urban	Rural (45/DAY)	Urban (61/DAY)	TOTAL
INDIA	1311756851	903226058	408530792	14835488010436	9095938085843	23931426096279
Andhra Pradesh	91628986	61058384	30570601	1002883964713	680654441876	1683538406589
Arunachal Pradesl	1499034	1155219	343816	18974468494	7655056715	26629525208
Assam	33805971	29040894	4765077	476996676575	106094446755	583091123331
Bihar	112774174	100036349	12737824	1643097034986	283607659643	1926704694629
Chhattisgarh	27673907	21241914	6431993	348898435814	143208334664	492106770478
Goa	1580087	597707	982380	9817343215	21872686367	31690029583
Gujarat	65476198	37585749	27890449	617345924509	620980847190	1238326771699
Haryana	27464027	17885102	9578925	293762800293	213274768307	507037568600
Himachal Pradesh	7436637	6690707	745930	109894862832	16608126853	126502989685
Jammu & Kashmir	13586382	9867045	3719338	162066208072	82811056611	244877264683
Jharkhand	35737071	27142940	8594132	445822784884	191348341762	637171126646
Karnataka	66186435	40591696	25594739	666718603352	569866871217	1236585474569
Kerala	36189825	18927024	17262801	310876366665	384356261247	695232627913
Madhya Pradesh	78678881	56937070	21741811	935191376913	484081411565	1419272788478
Maharashtra	121738609	66685609	55053000	1095311130691	1225755051033	2321066181724
Manipur	3093770	2190105	903665	35972482492	20120100510	56092583002
Meghalaya	3214123	2569054	645070	42196705600	14362472456	56559178056
Mizoram	1188637	569220	619417	9349439731	13791326289	23140766020
Nagaland	2143373	1524828	618545	25045291999	13771909393	38817201392
Odisha	45471976	37884697	7587278	622256153067	168930752187	791186905254
Punjab	30055221	18789503	11265718	308617579322	250831216708	559448796030
Rajasthan	74260653	55791933	18468721	916382496715	411206064718	1327588561433
Sikkim	661457	495081	166376	8131709170	3704357704	11836066874
Tamil Nadu	78159121	40331973	37827149	662452649564	842221463139	1504674112703
Tripura	3980069	2938497	1041572	48264806667	23190599093	71455405760
Uttar Pradesh	216462923	168260037	48202885	2763671110377	1073237243690	3836908354067
Uttarakhand	10926794	7623351	3303443	125213541760	73551151286	198764693046
West Bengal	98882254	67364900	31517354	1106468482865	701733881738	1808202364603
A.& N.Islands	412295	256850	155445	4218764860	3460983202	7679748062
Chandigarh	1143402	31407	1111995	515857541	24758567662	25274425204
D.& N.Haveli	372351	198373	173978	3258278011	3873610318	7131888330
Daman & Diu	263517	65429	198088	1074669107	4410433203	5485102310
Delhi	18186899	453961	17732937	7456313195	394823849221	402280162417
Lakshadweep	69846	15319	54526	251620899	1214026306	1465647205
Puducherry	1351946	428132	923814	7032075484	20568715214	27600790698

Table 2f State Specific Cost OF UBI 2018-19 (Rangarajan Methodology)

	2018-19 Poverty line		Population 2018		State Specific UBI cost		
STATES	Rural	Urban	Rural	Urban	Rural	Urban	Total
Andhra Pradesh	1553	1829	61058384	30570601	1137716598091	670955884926	1808672483017
Arunachal Pradesh	1710	1859	1155219	343816	23708010518	7671138619	31379149137
Assam	1336	1780	29040894	4765077	465751703997	101800817081	567552521078
Bihar	1260	1516	100036349	12737824	1511991176461	231722219533	1743713395994
Chhattisgarh	1253	1594	21241914	6431993	319340385646	123063700759	442404086405
Goa	1792	1891	597707	982380	12853046659	22297283058	35150329717
Gujarat	1611	1877	37585749	27890449	726406358584	628082770156	1354489128740
Haryana	1538	1982	17885102	9578925	330117402837	227779527126	557896929963
Himachal Pradesh	1468	1843	6690707	745930	117837302269	16498234921	134335537190
Jammu & Kashmir	1695	1836	9867045	3719338	200715749904	81922553003	282638302907
Jharkhand	1329	1597	27142940	8594132	432988845825	164691319094	597680164918
Karnataka	1397	1836	40591696	25594739	680687751767	563827297154	1244515048922
Kerala	1487	1835	18927024	17262801	337743638554	380171199609	717914838162
Madhya Pradesh	1198	1716	56937070	21741811	818860105222	447816446186	1266676551407
Maharashtra	1611	1975	66685609	55053000	1289125573065	1304711627619	2593837200683
Manipur	2586	2011	2190105	903665	67963536241	21809057703	89772593943
Meghalaya	1389	1891	2569054	645070	42825515294	14637531633	57463046928
Mizoram	1438	2093	569220	619417	9825682440	15556230982	25381913421
Nagaland	1779	2104	1524828	618545	32544662492	15616033649	48160696141
Odisha	1230	1516	37884697	7587278	559373760190	138049693906	697423454096
Punjab	1523	1842	18789503	11265718	343344266684	248986144777	592330411461
Rajasthan	1443	1934	55791933	18468721	965824349340	428711677491	1394536026831
Sikkim	1910	2192	495081	166376	11346325816	4375354017	15721679833
Tamil Nadu	1532	1897	40331973	37827149	741618513162	861070214052	1602688727214
Tripura	1206	1638	2938497	1041572	42524839000	20472368471	62997207471
Uttar Pradesh	1130	1725	168260037	48202885	2281158374867	997698295246	3278856670113
Uttarakhand	1302	1804	7623351	3303443	119069499752	71509999799	190579499551
West Bengal	1259	1771	67364900	31517354	1017433598521	669808327610	1687241926131
A.& N.Islands	2045	2414	256850	155445	6302598378	4503372634	10805971012
Chandigarh	1900	1906	31407	1111995	716258347	25433774183	26150032530
D.& N.Haveli	1533	1989	198373	173978	3649494419	4153526335	7803020754
Daman & Diu	2242	1781	65429	198088	1760294634	4233358803	5993653438
Delhi	2011	2166	453961	17732937	10952496325	460813971563	471766467888
Lakshadweep	1701	1913	15319	54526	312754106	1251464157	1564218263
Puducherry	1492	1819	428132	923814	7665357722	20160770686	27826128407
All-India					14672055827129	9001863186539	23673919013668

Table 2f presents the state specific UBI for 2018, which incorporate the inter-state price differentials. Surprisingly in this methodology, the state specific Basic Income cost is lower than all-India level. A total amount of Rs.23.67 lakh crore is required to fund Basic Income for 2018-19 which constitute 16.8% of estimated GDP for 2018-19.

International Standard of Poverty

The International poverty line is a monetary threshold limit below which an individual is considered to be living in poverty. Originally it was set at $1 a day but since the cost of living for basic goods changes, The World Bank periodically changes the poverty threshold limit. In the year 2008, this poverty threshold was $1.25 per day per person which was increased to $1.90 per day per person since 2015 and it's still continuing. The World Bank also set a separate poverty line based on nature of the country i.e developed country, developing country. The threshold limit for developing country, under which India comes was set at $3.2 per day per person (Weller, 2017). If we consider the International Poverty Line as the basic income level, the cost of providing Basic Income goes up as the poverty rate increases. An estimate of Basic Income based on this methodology has been exercised in table 3a for both International average as well as for developing country separately. The cost of funding Basic Income for providing $1.2 per day per person to every individuals stands at Rs. 44 Lakh crore which is 51.3% of GDP of that year and that of providing $3.2 per day per person stands at Rs.75 lakh crores which constitute a huge 86.5% of GDP of that year. These estimates are higher than other estimates of Basic Income.

Table 3a- International poverty level (1.9$/day),Developing countries (3.2$/day)

	TOTAL	1.9 $/DAY	3.2 $/DAY
INDIA	1210854977	44871863737666	75574302534478
Andhra Pradesh	84580777	3134394434066	5279024615678
Arunachal Pradesh	1383727	51278155166	86363936978
Assam	31205576	1156416235408	1947664820464
Bihar	104099452	3857717492216	6497263197128
Chhattisgarh	25545198	946653947484	1594377987972
Goa	1458545	54050760610	91033627630
Gujarat	60439692	2239774106136	3772282936488
Haryana	25351462	939474478796	1582286149268
Himachal Pradesh	6864602	254388420916	428447269228
Jammu & Kashmir	12541302	464755569516	782752823028
Jharkhand	32988134	1222474269772	2058921395476
Karnataka	61095297	2264069516226	3813201866958
Kerala	33406061	1237961808538	2085005891254
Madhya Pradesh	72626809	2691404287922	4532929656926
Maharashtra	112374333	4164368032314	7013731619862
Manipur	2855794	105830014052	178241526716
Meghalaya	2966889	109946972562	185175410046
Mizoram	1097206	40660259948	68481015284
Nagaland	1978502	73319327116	123486223828
Odisha	41974218	1555480570644	2619778842252
Punjab	27743338	1028112619604	1731572697932
Rajasthan	68548437	2540267978346	4278382146918
Sikkim	610577	22626762466	38108552878
Tamil Nadu	72147030	2673624637740	4502984730420
Tripura	3673917	136148016186	229303855638
Uttar Pradesh	199812341	7404645732778	12471087451174
Uttarakhand	10086292	373777808936	629525828888
West Bengal	91276115	3382510269670	5696907441610
A.& N.Islands	380581	14103570698	23753582534
Chandigarh	1055450	39112866100	65874856300
D.& N.Haveli	343709	12737168122	21452253526
Daman & Diu	243247	9014247326	15182018258
Delhi	16787941	622127517578	1047802549574
Lakshadweep	64473	2389240434	4024017822
Puducherry	1247953	46246642274	77889738542

Targeted Universal Basic Income (TUBI)

Targeted Universal Basic Income is an alternative approach of Universal Basic Income in the sense that this is universal but applicable only for a particular section of the people. Universality in this method includes each and every individuals of the targeted section. For example, if the scheme is only for people aged 65 or above, every individuals of the targeted age group will be qualified to receive the benefits. The underlying idea for implementing a TUBI is fiscal restriction to implement a full UBI, mainly in developing country. In this context, when Basic Income is implemented to reduce poverty by providing the poor an extra income, a TUBI can be implemented with lower fiscal burden. Although TUBI is not as efficient as full UBI in targeting the desired population, as there will be inclusion and exclusion errors in implementing TUBI. It will also indulge bureaucratic and administrative inefficiencies like any other cash transfer scheme.

Basic Income to Poor

Basic Income to poor is a kind of cash transfer that comes under Targeted UBI whereby everyone whose income fall below the BPL level is eligible to receive the benefits. It is targeted because it's exclusively for individuals with income less than BPL and it's universal because everyone in that group will be given the benefit. Under this methodology certain portion of the population will be qualified for the benefit. In the context of India, 21.9 percent of the total population are qualified for the benefit as per Tendulkar committee and 29.5 percent of the population as per Rangarajan committee for 2011-12. The total cost of providing Basic Income under this methodology has been presented in table 4a and 4b. If Tendulkar committee poverty rate is considered the total cost is about Rs.2.7 lakh crore which is 3.1% of GDP of that year and

if Rangarajan committee poverty rate is considered the total cost rises to Rs. 4.8 lakh crore which is 5.5% of GDP of that year.

Table 4a- UBI to Poor,2011 (Tendulkar Methodology)

STATES	NUMBER OF PERSON BPL (lakh)			COST OF UBI (LAKH)		
	Rural	Urban	Total	Rural (27/day)	Urban(33/day)	Total
Andhra Pradesh	61.8	17	78.8	609039	204765	813804
Arunachal Pradesh	4.2	0.7	4.9	41391	8432	49823
Assam	92.1	9.2	101.3	907646	110814	1018460
Bihar	320.4	37.8	358.2	3157542	455301	3612843
Chhattisgarh	88.9	15.2	104.1	876110	183084	1059194
Goa	0.4	0.4	0.8	3942	4818	8760
Gujarat	75.4	26.9	102.2	743067	324011	1067078
Haryana	19.4	9.4	28.8	191187	113223	304410
Himachal Pradesh	5.3	0.3	5.6	52232	3614	55845
Jammu & Kashmir	10.7	2.5	13.3	105449	30113	135561
Jharkhand	104.1	20.2	124.3	1025906	243309	1269215
Karnataka	92.8	37	129.8	914544	445665	1360209
Kerala	15.5	8.5	23.9	152753	102383	255135
Madhya Pradesh	191	43.1	234.1	1882305	519140	2401445
Maharashtra	150.6	47.4	198	1484163	570933	2055096
Manipur	7.4	2.8	10.2	72927	33726	106653
Meghalaya	3	0.6	3.6	29565	7227	36792
Mizoram	1.9	0.4	2.3	18725	4818	23543
Nagaland	2.8	1	3.8	27594	12045	39639
Odisha	126.1	12.4	138.5	1242716	149358	1392074
Punjab	13.4	9.8	23.2	132057	118041	250098
Rajasthan	84.2	18.7	102.9	829791	225242	1055033
Sikkim	0.4	0.1	0.5	3942	1205	5147
Tamil Nadu	59.2	23.4	82.6	583416	281853	865269
Tripura	4.5	0.8	5.2	44348	9636	53984
Uttar Pradesh	479.4	118.8	598.2	4724487	1430946	6155433
Uttarakhand	8.2	3.4	11.6	80811	40953	121764
West Bengal	141	44	185	1389555	529980	1919535
A.& N.Islands	0.04	0	0.04	394	0	394
Chandigarh	0.004	2.3	2.3	39	27704	27743
D.& N.Haveli	1.2	0.3	1.5	11826	3614	15440
Daman & Diu	0	0.3	0.3	0	3614	3614
Delhi	0.5	16.5	17	4928	198743	203670
Lakshadweep	0	0.02	0.02	0	241	241
Puducherry	0.7	0.6	1.3	6899	7227	14126
INDIA	2166.6	531.2	2697.8	21351843	6398304	27750147

Table 4b-UBI to poor for 2011 (Rangarajan Methodology)

STATES	NUMBER OF PERSON BPL (lakh)			COST OF UBI (Llakh)		
	Rural	Urban	Total	Rural(32/day)	Urban(47/day)	Total
Andhra Pradesh	71.5	45.7	117.2	835120	783984	1619104
Arunachal Pradesh	4.3	1	5.3	50224	17155	67379
Assam	114.1	15.4	129.5	1332688	264187	1596875
Bihar	376.8	61.4	438.2	4401024	1053317	5454341
Chhattisgarh	97.9	26.9	124.8	1143472	461470	1604942
Goa	0.1	0.8	0.9	1168	13724	14892
Gujarat	109.8	58.9	168.8	1282464	1010430	2292894
Haryana	18.4	14	32.4	214912	240170	455082
Himachal Pradesh	6.9	0.6	7.5	80592	10293	90885
Jammu & Kashmir	11.7	7.6	19.3	136656	130378	267034
Jharkhand	117	25.5	142.5	1366560	437453	1804013
Karnataka	74.8	6.9	135.7	873664	118370	992034
Kerala	12.3	26	38.3	143664	446030	589694
Madhya Pradesh	241.4	86.3	327.8	2819552	1480477	4300029
Maharashtra	139.9	88.4	228.3	1634032	1516502	3150534
Manipur	6.7	6.3	12.9	78256	108077	186333
Meghalaya	6.4	1	7.4	74752	17155	91907
Mizoram	1.8	1.2	3	21024	20586	41610
Nagaland	0.8	1.9	2.8	9344	32595	41939
Odisha	169	26	195	1973920	446030	2419950
Punjab	12.9	18.7	31.6	150672	320799	471471
Rajasthan	112	39.5	151.5	1308160	677623	1985783
Sikkim	0.9	0.2	1.1	10512	3431	13943
Tamil Nadu	91.1	72.8	163.9	1064048	1248884	2312932
Tripura	6.1	3.2	9.3	71248	54896	126144
Uttar Pradesh	600.9	208.2	809.1	7018512	3571671	10590183
Uttarakhand	8.9	9.4	18.4	103952	161257	265209
West Bengal	188.6	86.8	275.4	2202848	1489054	3691902
A.& N.Islands	0.2	0.1	0.3	2336	1716	4052
Chandigarh	0	2.3	2.3	0	39457	39457
D.& N.Haveli	1	0.3	1.3	11680	5147	16827
Daman & Diu	0	0	0	0	0	0
Delhi	0.5	26.3	26.7	5840	451177	457017
Lakshadweep	0	0	0	0	0	0
Puducherry	0.2	0.1	0.2	2336	1716	4052
INDIA	2605.2	1024.7	3629.9	30428736	17578729	48007465

Consideration for an alternative approach of welfare redistribution (towards an affordable Basic Income) has influenced the political spectrum of India. The main opposition party of ruling government, Indian National Congress president Mr. Rahul Gandhi has proposed minimum income guarantee called “NYAY” to the poor. As the term “NYAY” itself a Hindi origin indicates justice, the program aims at combating hunger and poverty altogether through a redistribution of income because although the per capita income is about $2000, rising unemployment and inequality have left many in poverty trap. Credit Suisse in its 2018 Global Wealth Report said that the bottom 60% in India own a mere 4.7% of the country's wealth. The richest 1% own 51.5% (Chakravarty, 2018). Although the idea has been criticized by many Indian analysts like James Crabtree, to be doomed on cost aspect and targeting (Crabtree, 2019), it has gathered support from Former RBI Governor Raghuram Rajan. Rajan believes the direct benefit transfer will empower the people on building livelihood and decision making which will translate into growth at root level (Raghuram Rajan says Rahul Gandhi's NYAY scheme workable, conditions apply, 2019). It also helps create capacity through schooling, healthcare to improve human capital that would contribute to the economy.

As there is no clear vision whether the program considers the poverty level as estimated by Tendulkar committee or Rangarajan committee, here we estimate the expected cost of providing NYAY for both the poverty rate estimates. Table 4c provides this estimate. If Tendulkar committee poverty rate is considered the total cost will be Rs.19 lakh crore which is 22.2% of GDP of 2011-12 period and if Rangarajan committee poverty rate is considered the cost will be Rs. 26 lakh crore which is 30% of GDP of 2011-12 yaer.

Table 4c -Cost of providing NYAY for 2011-12 period

STATES	TENDULKAR COMMITTEE		RANGARAJN COMMITTEE	
	Total (LAKHS)	**Rs.6000/ month**	**Total (LAKHS)**	**Rs.6000/ month**
Andhra Pradesh	78.8	5673600	117.3	8445600
Arunachal Pradesh	4.9	352800	5.3	381600
Assam	101.3	7293600	129.5	9324000
Bihar	358.2	25790400	438.2	31550400
Chhattisgarh	104.1	7495200	124.8	8985600
Goa	0.8	57600	0.9	64800
Gujarat	102.2	7358400	168.8	12153600
Haryana	28.8	2073600	32.4	2332800
Himachal Pradesh	5.6	403200	7.5	540000
Jammu & Kashmir	13.3	957600	19.3	1389600
Jharkhand	124.3	8949600	142.5	10260000
Karnataka	129.8	9345600	135.7	9770400
Kerala	23.9	1720800	38.3	2757600
Madhya Pradesh	234.1	16855200	327.8	23601600
Maharashtra	198	14256000	228.3	16437600
Manipur	10.2	734400	12.9	928800
Meghalaya	3.6	259200	7.4	532800
Mizoram	2.3	165600	3	216000
Nagaland	3.8	273600	2.8	201600
Odisha	138.5	9972000	195	14040000
Punjab	23.2	1670400	31.6	2275200
Rajasthan	102.9	7408800	151.5	10908000
Sikkim	0.5	36000	1.1	79200
Tamil Nadu	82.6	5947200	163.9	11800800
Tripura	5.2	374400	9.3	669600
Uttar Pradesh	598.2	43070400	809.1	58255200
Uttarakhand	11.6	835200	18.4	1324800
West Bengal	185	13320000	275.4	19828800
A.& N.Islands	0.04	2880	0.3	21600
Chandigarh	2.3	165600	2.3	165600
D.& N.Haveli	1.5	108000	1.3	93600
Daman & Diu	0.3	21600	0.16	11520
Delhi	17	1224000	26.7	1922400
Lakshadweep	0.02	1440	0.04	2880
Puducherry	1.3	93600	0.2	14400
All-INDIA	2697.8	194241600	3629.9	261352800

Poverty Gap Index

Poverty gap index measures the intensity of poor among the poor. It represents the mean short fall from the poverty line and is regarded as a poverty eliminating technique where by the sum of short fall is fulfilled to push the income of the poor above the poverty line. This methodology can be used to lift the BPL person above BPL by providing them money equal to the gap between their actual income and BPL threshold. It only supplements the income of the individuals to come out of poverty.

In this case, the cost of providing Basic Income is very less as it only provides fraction of income rather than full income to come out of poverty. A case for Basic Income based on Poverty gap index has been estimated for both Tendulkar committee poverty ratio as well as Rangarajan committee poverty ratio. Table 5a presents the mean poverty gap (based on Tendulkar committee report) for each state. Basic Income to cover this model need Rs.51.1 Thousand crore for 2011 which is mere 0.5% of GDP of same year. Table 5b represents the case for Rangarajan Committee and based on similar calculation it needs Rs.100 thousand crore which is 1.1% of GDP of same year.

Table 5a-UBI to Fill up Poverty Gap ,2011 (Tendulkar Methodology)

STATES	PERSON BPL (lakh)	POVERTY GAP (MEAN)	COST OF UBI(lakh)
Andhra Pradesh	78.8	141.86	134143
Arunachal Pradesh	4.9	252.09	14823
Assam	101.3	155.55	189087
Bihar	358.2	148.54	638484
Chhattisgarh	104.1	154.73	193289
Goa	0.8	173.28	1663
Gujarat	102.2	157.88	193624
Haryana	28.8	202.52	69991
Himachal Pradesh	5.6	113.6	7634
Jammu & Kashmir	13.3	162.66	25961
Jharkhand	124.3	153.98	229677
Karnataka	129.8	159.1	247814
Kerala	23.9	175.42	50310
Madhya Pradesh	234.1	173.11	486301
Maharashtra	198	192.9	458330
Manipur	10.2	193.21	23649
Meghalaya	3.6	129.21	5582
Mizoram	2.3	186.54	5149
Nagaland	3.8	227.21	10361
Odisha	138.5	142.29	236486
Punjab	23.2	170.21	47386
Rajasthan	102.9	173.59	214349
Sikkim	0.5	101.23	607
Tamil Nadu	82.6	141.17	139928
Tripura	5.2	107.83	6729
Uttar Pradesh	598.2	155.3	1114806
Uttarakhand	11.6	118.25	16460
West Bengal	185	138.94	308447
A.& N.Islands	0.04	122.61	59
Chandigarh	2.3	223.67	6173
D.& N.Haveli	1.5	254.95	4589
Daman & Diu	0.3	162.04	583
Delhi	17	192.87	39345
Lakshadweep	0.02	141.86	34
Puducherry	1.3	270.3	4217
INDIA	2697.8	157.9	5111791

Table 5b-UBI to Fill up Poverty Gap,2011 (Rangarajan Methodology)

STATES	PERSON BPL (lakh)	POVERTY GAP (MEAN)	COST OF UBI(lakh)
Andhra Pradesh	117.3	205.39	289107
Arunachal Pradesh	5.3	324.38	20631
Assam	129.5	228.56	355182
Bihar	438.2	208.25	1095062
Chhattisgarh	124.8	234.31	350903
Goa	0.9	217.34	2347
Gujarat	168.8	253.1	512679
Haryana	32.4	244.51	95065
Himachal Pradesh	7.5	169.22	15230
Jammu & Kashmir	19.3	221.31	51255
Jharkhand	142.5	220.22	376576
Karnataka	135.7	215.47	350871
Kerala	38.3	203.25	93414
Madhya Pradesh	327.8	271.86	1069388
Maharashtra	228.3	244.04	668572
Manipur	12.9	282.14	43675
Meghalaya	7.4	191.68	17021
Mizoram	3	309.8	11153
Nagaland	2.8	286.21	9617
Odisha	195	221.95	519363
Punjab	31.6	217.3	82400
Rajasthan	151.5	223.74	406759
Sikkim	1.1	140.02	1848
Tamil Nadu	163.9	259.93	511230
Tripura	9.3	188.22	21005
Uttar Pradesh	809.1	229.66	2229815
Uttarakhand	18.4	212.99	47028
West Bengal	275.4	206.58	682706
A.& N.Islands	0.3	199.95	720
Chandigarh	2.3	323.18	8920
D.& N.Haveli	1.3	280.46	4375
Daman & Diu	0.16	272.4	523
Delhi	26.7	302.92	97056
Lakshadweep	0.04	222.39	107
Puducherry	0.2	165.19	396
INDIA	3629.9	230.18	10026365

Conclusion

This chapter deals with the cost estimation of implementing basic income in India. For calculation of the estimates it draws data on poverty rate, BPL level and percentage of population below BPL. This data has been derived from Tendulkar committee and Rangarajan committee report on estimation of poverty rate and BPL. Data on population has been taken from Population census 2011. The data on growth rate population as well as growth rate of price level has been taken from CMIE database. Although there are various criteria for deciding basic income amount, this study has concentrated on poverty reduction as the basic criteria for deciding basic income amount and based on that it provides different estimates of cost using different methodology in regard to basic income amount for a feasibility condition depending upon the fiscal space of the country. As stated above in the first four estimates are derived from Tendulkar committee and Rangarajan committee report on BPL. This is a full UBI where every individual receive the benefit. As we can see in table1b which provides total cost of UBI using Tendulkar committee for a national basis based on this committee estimate of BPL for rural and urban. Here everybody is included to receive the benefit which here is the corresponding BPL level and in doing so it will incur an expenditure of Rs.12.75 lakh crore which is 14.6 of GDP of 2011-12 and the estimate for 2018-19 with same methodology gives a cost of Rs.18.75 lakh crore which is 13.3 % of projected GDP. This estimate for 2018-19 includes the population growth since 2011 and rise in inflation while estimating the cost. Similarly the estimates using Rangarajan committee estimated BPL have also been derived. In this methodology the cost of providing a national basis UBI stands at Rs.16.20 lakh crore which is 18.5% of GDP in 2011-12 and the cost for 2018-19 period is Rs.23.93 lakh crore constituting 17% of estimated GDP for 2018-19.

It also argues for different amount of UBI for different states and again with respect to sectoral division (rural and urban) due to efficiency criterion. The underlying idea for this approach lies in the inter-state price differential, again taking into account the rural and urban sector. As we can see in the table no-1a and 2a, states have different level of BPL. Some states have higher BPL while others have lower than the national average and hence this study make a case for different amount of UBI for different states. In doing so it will eliminate the inefficiency that could arise if a national level UBI is given to all. The cost of state specific estimates using Tendulkar committee report is Rs.13 lakh crore for 2011-12 which is 14.9% GDP of that period and Rs.19.04 lakh crore for 2018-19 which is 13.5% GDP. The cost of state specific estimates using Rangarajan committee report is Rs.16.21 lakh crore for 2011-12 that constitute 18.5% of GDP and Rs.23.67 lakh crore in 2018-19 which is 16.8 % of GDP. Here we can see UBI using Rangarajan committee estimates is higher than Tendulkar estimates. It also shows there is very less difference in UBI using national basis and UBI using state specific basis, but the distribution differs between both estimates.

This study also makes a case for a targeted approach where only the poor receive the benefit which is different form universal approach where everybody gets the money . Such an approach is desirable if the fiscal space to fund the program is restricted. The amount needed to fund this approach is much lower than the former case where every individual receives the benefit. This study estimates the cost of UBI under this approach for both Tendulkar and Rangarajan committee poverty rate and this has been done only for 2011-12 period as there is no data on poverty rate for 2018-19. UBI under this methodology costs just Rs.2.7 lakh crore for Tendulkar estimates and Rs.4.8 lakh crore for Rangarajan estimates which is 3.1% and 5.5% of GDP respectively. Under this methodology the cost is lower than previous methodologies. Under this

methodology the cost for NYAY scheme is Rs.19.42 lakh crore for Tenduklar estimate of poverty rate and Rs.26.13 lakh crore for Rangarajan estimate of poverty rate.

This also considers the international poverty index which estimates the world poverty defined as $1.9/day for all and $3.2/day in developing country. The total cost of providing UBI using $1.9/day basis is Rs.44.87 lakh crore and that of $3.2/day basis is Rs.75.57 lakh crore. This estimates show that if basic income given as per this approach, it will have a very high fiscal burden on the economy as it involve huge cost to fund

Finally it makes a case considering the Poverty Gap Index and estimates the cost by transferring the amount just needed to lift the poor out of poverty line. In this methodology the cost is very low. When Tendulkar committee estimates is taken, the cost to fill up the mean poverty gap is mere Rs.51 thousand crore in 2011-12 which is just 0.5% of GDP and when rangarajan committee estimate is taken the total cost is Rs.100 thousand crore only which is 1.1% of the GDPThis chapter and estimates the cost by transferring the amount just needed to lift the poor out of poverty line.

Chapter 5

Conclusion

The Welfare state paradigm directs the states to undertake social policies for protection and promotion of the vulnerable section of the society. These social policies can take the forms of social security net, public services or other financial support from the state. Here we confine the content to financial support only. Different countries have implemented various forms of cash transfer schemes like pension to the elderly and widows, maternal grants, unemployment benefits etc. These cash transfer schemes are based on conditionality and target a specific portion of the population. On the other hand there is UBI which is based on the principle of un-conditionality and universality. These features of UBI make it unique from other cash transfer schemes. UBI provides a minimum economic capacity to live a dignified life to everyone by providing certain amount of cash regularly for lifetime. This is based on the principle of social justice as nobody in the world should be deprived of a share in earths' wealth and nobody should live in vulnerability due to private ownership of property. It thus becomes a matter of right to have a minimum basic income just because someone is alive and belong to the earth as envisaged by Thomas Paine. Thus the idea for a basic income has been existed centuries ago but it has gained global attention very recently.

The challenge of poverty in capitalist economies rests on contingent conditions of historical in nature. The intervention of state in the form of welfare state alone enabled the societies to solve such problem. However, degree of intervention is always debated, but not the intervention per se. Different types of interventionist measures for poverty alleviation like food subsidy programs, employment programs, child nutrition program, old-age pensions, scholarships, medical

insurance, free public health, financial inclusion etc are already in pace. However, the degree of success with all these programs is highly debatable. Besides, inefficiencies of delivery systems, particularly in poor countries, another major problem that is arising is the precarity of poor. The precarity comes from instability of employment, place of stay, demographic state, gendered spaces, educational status, international division of labour, etc. The most fluid instrument for anyone in general and poor in particular is the liquid cash [Guy Standing 2011]. It not only increases the flexibility in use, but also gives a choice for the poor how to use it, instead of a centralized agency called state to decide. Second, it solves the age limitation of capitalist system which recognizes only wage labour and not the indirect and invisible labour of women, children, old etc. A basic income transfer in terms of cash is going to address several issues at one shot. Moreover, after the arrival of information technology, it became much more easy to transfer money directly a person's account with much less chances of leakages than the kind transfers, which are plagued by myriad of problems from leakages to exclusion to inefficiency.

In the current context of the globalized world economy with rising inequality and job replacement, the case for a basic income becomes more relevant than it was century ago. Both in developing countries as well as developed countries, political thinker, economists, philosopher are thinking about Basic Income as a redistributive mechanism to end poverty. In developing countries income inequality and poverty poses a greater threat to the development for all. Since independence Indian economy has experienced many phases of development. India adopted five-year plans to undertake policies for its growth and development and make it a self-sufficient country without hunger. Both at state level as well as national level numerous social policies have been executed to reduce poverty and deprivation but as the current figures represents, these schemes have not been so effective in achieving the goals. Data released by the Planning

Commission on 22 July 2013 suggested poverty rate has declined from 37.2 % in 2004-05 to 21.9 % in 2011-12, but that's still in a higher level. Apart from this recent years have witnessed a significant increase in inequality level in India. In the year 2017, 73% of total wealth addition went to just top 1 % of the population (Oxfam Report at World Economic Forum). The trend has thus indicated that India's growth has not been inclusive and it has left behind the poor section of the society.

In a capitalist economy the need for basic income emerges from precariousness of work. The changing pattern work with contractual basic or part time jobs poses a threat to employment and income security. Job scarcity due to automation and artificial intelligence also calls for an income security for the unemployed. Facebook CEO Mark Zuckerberg said "technology and automation are eliminating jobs and there is a need to think for a financial security for those" and also urged for something like Basic Income. Tech Icon Elon Musk also warned of job loss due to automation. The foundation of eBay's Pierre Omidyar, says 'automation is replacing traditional jobs,' and the gig economy 'may make employment far less stable and reliable for supporting a livelihood'.

When we look into the Indian context, on one side there is poverty and wide spread inequality and on the other side there is threat from automation. The social welfare programs aimed at reducing poverty are fetched with inefficiencies. Corruption and administration pose constraints in achieving the desired goals. And hence a case for Basic Income becomes more prudent than any other country.

When we look into the literature, international experiences of piloting basic income experiment have shown positive impact on the lives of the people. Alaska Permanent Fund show free money does not reduce employment which refutes the criticism that free money will make people lazy to work rather it increased the part time work in these provinces. So it also shows how this enabled them to choose part time work and devote their time to other works that they find good for them. In the Indian case also, basic income increased other economic activities through investment in capital equipment, water resources, investment in livestocks and other small business. It also changed the pattern of work. For example in Indian case, people started working for themselves rather than going to others for employment. Experience from Kenya shows; people invested the money on capital goods and started or increased their own small business or other occupations like fishing nets for fishing, buying livestock (goat, cattle) to sell milk, meat etc, land purchasing for fruits and vegetables growing. Their work time also increased after getting the money due to expansion of economic activities which increased their income. These results thus refute the conception that after getting free money people stop working. This could be the result of the fact that basic income just provide a minimum living below which nobody should fall. The urge to live a better life, having secured a basic living might have given such outcomes.

Improved economic activities that increased their income level helped reduce poverty. As seen in the case of Namibia, the poverty rate (estimated from Food Poverty Line) fell from 76% in 2007 to just 37% after one year of BIG grant. Although the percentage reduction data of poverty is not available for Indian case, basic income enabled them to reduce their indebtedness and invest in other productive sources that could have a positive impact on poverty. There is a conception that “poverty is just lack of money. Give them money, they will find a way to get out

of poverty". This seems to be proved true in case of basic income, real cash in hand reduced their economic insecurities, enabled them carry productive works, helped them reduce indebtedness that a direct impact on poverty reduction.

Basic income was proved to be emancipatory in many directions. It enabled the dependent section of the population to live a dignified life without depending others. It provided freedom to the women in their daily life who are mostly dominated by their husband or in-laws. They could have a voice in decision making in the household. It broke the restraints in human capital formation by providing access to education to the children that would help break the intergenerational poverty and exploitation. One of the main objectives in Brazilian Basic income experiment was to reduce poverty through educating the children. It also shows access to schooling helped the children to stay away from child labor.

Basic income has also a greater impact on health and nutrition. Food sufficiency was met through basic income as well as extra income from other economic activities. It also enabled them to improve their food basket which could now include adequate amount of nutrient food like fish, milk, eggs, vegetables, pulses etc. People also tend to have frequent health check-ups and other medicare. They also attained improved mental health condition due to present and future economic securities.

Implementation of any programs depends on desirability and affordability of the programs which are complementary to each other. We can clearly see basic income is an advanced form of welfare program than any other welfare program (in-kind as well as conditional cash transfer)

and hence passes the case of desirability. Affordability depends on the amount of benefit to be paid and the size of population to receive the benefit. Supporters of basic income like Philippe Van Parijs have argued for a highest sustainable level of basic income to be given to everyone while some others have suggested a basic income sufficient enough to cover basic needs of human living. Considering the second line of argument this paper put importance on "poverty threshold level" as the reference to set up Basic Income level. For estimation of poverty threshold level it relies on Tendulkar Committee as well as Rangarajan Committee report on poverty level estimates and international standard of poverty which is based on global inference to poverty. The basic objective of these three poverty threshold is to eliminate poverty which is the ultimate aim of basic income in any developing country. This paper also suggests a level of basic income based poverty gap index which measure the mean difference of income from the poverty line. This approach is to target the actual difference of income to rise above the poverty line.

A quick summary of cost estimation has been provided below.

- If Tendulkar committee recommendation of BPL i.e Rs.27/day in rural and Rs.32/day in urban is considered, the total outlay for implanting basic income at national average will be Rs.12.75 lakh crore for 2011-12 period which is 14.6% of GDP. If the state specific UBI, that incorporates inter-state price differential and provides different level of UBI to different states, is accepted then the total expenditure incurred stands at Rs. 13.01 lakh crores for 2011-12 which is 14.9% of GDP.
- In order to arrive at the estimate for 2018-19, BPL line has been inflated based on CMIE data on inflation and the new BPL stands at Rs.37/ day in rural and Rs.44/day in urban. Based on this new BPL, the total cost of UBI will be Rs.18.75 crores approx. and

constitute 13.3% of projected GDP. In this case the cost for state specific UBI will be Rs.19.04 lakh crores which is 13.5 % of GDP.

- Now if we consider the Rangarajan committee recommended level of BPL i.e Rs.32/day in rural and Rs.47/day in urban, a national level basic income would cost about Rs.16.20 lakh crores for 2011-12 and 18.5% of GDP. And the state specific UBI would cost Rs.16.21 lakh crores and 18.5% of GDP. Here there is very little difference between both the estimates.
- The BPL for 2018-19 in this methodology is estimated at Rs.45/ day in rural and Rs.61/day in urban. Thus the total cost of national level UBI will be Rs.23.93 lakh crores and state specific UBI will be Rs.23.67 crores which is 17% and 16.8% respectively.
- The UBI set at International poverty level $1.9/day costs Rs.44.87 lakh crores and it is 51.3% of GDP and the poverty level for developing country level $3.2/day costs Rs.75.57 lakh crores which is 86.5 of GDP.
- If Tendulkar committee recommended poverty rate and BPL line is consider and the targeted population are only the poor instead of everyone, the cost of basic income stands at Rs.2.7 lakh crores only which is 2.1% of GDP and based on Rangarajan committee recommended level, the cost stands at Rs.4.8 lakh crores for 2011-12 which is 5.5% of GDP

The basic objective of this paper is to estimate the state specific cost of providing basic income. When we look at the available literature, basic income experiments have envisaged an equal level of basic income to everyone. But this paper diverges from this conception as it envisages

different level of basic income to different states. This is the main line of departure from other basic income experiments. The reason for such divergence emerges from the fact that when all the states are provided with equal level of basic income (national average poverty threshold), some states get higher level of income when compared to their state specific poverty threshold level while other states fall short of income as they have a higher state specific poverty threshold. Thus provision of an equal level of basic income to all the states could not be effective when we see the case of India. Such a case arises because of prevalence of inter-state price differentials. Again such a trend appear when to compare the rural to urban poverty threshold level as there is inter-sectoral price differentials also. Again when compare both the cases i.e. national average for all and state specific level, the total cost of basic income remain almost same but the latter case is more effective in reducing poverty level.

This paper also makes a case for partial UBI for the poor only which is selective in nature. Here the target groups are the poor whose income falls below poverty line. The NYAY scheme proposed by the congress government goes in line with this approach. Apart from this, partial UBI can also be made for women or dependent population who are unable to earn a living themselves. This works as a phased approach. The idea underlying this approach lies in the limited fiscal capacity by the state to fund such program.

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Some Considerations on Basic Income Policy in India and Its Cost

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Submission date: 29-Jun-2019 03:35PM (UTC+0530)
Submission ID: 1147892320
File name: Considerations_on_Basic_Income_Policy_in_India_and_Its_Cost.pdf (1.41M)
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