CHAPTER - 2
SURVEY OF LITERATURE

2.1 INTRODUCTION

Vast literature, both national and international related to various dimensions of food security and delivery mechanism is available. Thematic research on cash and food transfers has increased significantly since late nineties. Presently, at international forum Conditional Cash Transfers (CCTs)\(^{14}\) are used as an innovative approach in revolutionary way to deliver the social services and have become an important component of national policies after successful experiment in more than 30 developing countries (Annexure 2.1) across the world.

This chapter examines some significant studies relevant to the present research work. This literature review will provide an overview of the international and national experience of traditional policy of in-kind\(^{15}\) and next generation approach of cash transfer in ensuring food security.

The chapter has been divided in to three parts:

Section 2.2 makes a review of country specific studies related to the research problems.

Section 2.3 is devoted to international comparative studies.

Section 2.4 discusses the Indian studies with focus on issues related to PDS and cash transfer attempts.

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\(^{14}\) Conditional cash transfers are focused on human capital development and target households with children of a certain age (usually primary or secondary school age) As such, CCTs are aimed to reduce both short-term food insecurity and the long-term intergenerational transmission of poverty and vulnerability. These programmes emphasize on the use of market-oriented demand-side interventions to directly support the poor rather than supply-side mechanisms.

\(^{15}\) In-kind means a specific quantity of food items is provided to beneficiaries. It is one of old methods to reduce hunger and poverty. It has been adopted by almost all countries, developed or underdeveloped at one point of time or the other.
2.2 COUNTRY SPECIFIC STUDIES

In the decade of 1990’s many developing countries especially Latin American and Caribbean countries shifted their policy from in-kind transfer to cash transfer in order to make food security programmes more effective. This section analyzes the impact of these policy changes on the food consumption, nutrition, health care and education of the targeted poor sections in particular countries viz. Mexico, Brazil, Zambia, Jamaica, South Africa and Sri Lanka.

2.2.1 Mexico

Government of Mexico has changed its food policy substantially since 1990’s as it moved from generalized to selective targeting programmes and implemented National Programme for food and Nutrition as an effective strategy for transferring resources and inputs to the poor. Again in 1986, a targeted Food Stamp Programme was started. Targeting was done in three ways: firstly, on the basis of income criterion (where income was less than the twice of the minimum wage), secondly, geographical and thirdly self targeting (transfer was available to all who apply subjected to the threshold income limit). As a result of this threefold targeting, the number of beneficiaries declined by 80 per cent within one year. This indicates that proper identification of beneficiaries is a first step towards devising an efficient programme. But this programme failed to achieve its objective due lack of political transparency and corruption and poverty levels increased from 16.2 per cent in 1994 to 22.0 per cent in 1996\(^\text{16}\).

In 1997, Mexican government implemented PROGRESA\(^\text{17}\) (Programa de Educación, Salud, y Alimenación), in 300,000 rural families to break the entangled web of poverty through the development of human capital. The program offered conditional cash transfers to the rural poor in exchange for

\(^{16}\) Economic commission for Latin American (ECLAC-online data)

\(^{17}\) A financial support of 11 USD (110 pesos) per month was granted to the families for food consumption.
sending their children to school and for regular attendance at health clinics. The
conditional cash transfers were demand-driven involvements that sought to
remove many of the practical barriers and opportunity costs which the rural
families faced in attending health clinics and sending their children to school.
The budget was approximately $777 million in 1999 and equivalent to 0.2 per
cent of Mexico’s GDP. At the end of 1999, PROGRESA covered approximately 2.6 million families or about 40 per cent of all rural families and
one-ninth of all families in Mexico (IFPRI 2003).

The program was found to be quite successful in terms of education and
health. Attendance in secondary school was increased by more than 20 per cent
for girls and 10 per cent for boys in beneficiary households. Further
PROGRESA children had a 12 per cent lower incidence of illness than non-
PROGRESA children. Food expenditure in PROGRESA households was 13
per cent higher than in non-PROGRESA households, where PROGRESA
households were consuming higher-quality foods and more calories (Gantner
2007). However, PROGRESA was not free from the error of inclusion and
exclusion.

Therefore, the programme was restructured\textsuperscript{18} and renamed as
\textit{Oportunidades}\textsuperscript{19} in 2002. There were two principal modifications in
\textit{Oportunidades}, due to the IFPRI evaluation. First, the programme was
extended to urban areas also. The second important change was the extension
of education grants to the high school level. Later on, the programme was

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programme was extended to urban areas also. The second important change was the extension of
education grants to the high school level. Again in 2014, this programme renamed as PROSPERA.
Its objective is to strengthen the social rights of the poor by improving their capabilities, especially
their nutrition, health, and education capabilities, and contributing to breaking the cycle of
intergenerational poverty. PROSPERA is Mexico’s largest social safety program and the world’s
second largest conditional cash transfer program. It currently supports seven million low-income
families through direct monetary transfers, which represent about 30 million Mexicans.

\item[\textsuperscript{19}] The monthly transfer amount was about $10.50 (105 pesos) in the third grade of primary and about
$58 (580 pesos) for boys and $66 (660 pesos) for girls in the third year of high school. An
additional fixed monthly transfer equal to about $15.50 (155 pesos) was provided for food
consumption and nutritional supplements.
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extended to urban areas as well and covered children at high school level. The number of beneficiaries under this programme was 24.3 million Mexican citizens, of whom 95.8 per cent were women and 68 per cent lived in rural areas (IDB 2003).

In 2011, the programme had 5.8 million families registered under it with a budget allocation of $4.8 billion (1.68 per cent of GDP). On an average, each household received a transfer equivalent to $ 827 annually or $ 69 monthly (Yanes 2011). In poorest regions such as Chiapas and Oaxaca, over 58 per cent of the population was covered by the programme. It is estimated that under the impact of this programme, food consumption increased by 22 per cent; malnourished children decreased by 17.2 per cent; enrolment in secondary school increased by 11 per cent among girls, and 7.5 per cent among boys, regular health visits increased by 30–60 per cent among young children under 5 years; disease incidence decreased by 12 per cent among children 0–2 years of age; parental care visits increased by 8 per cent among first trimester pregnant women, and more than 50 per cent of women were using contraceptive methods (UNDP 2013). It was the first social program in Mexico which was subjected to a rigorous independent evaluation in terms of programme impacts that included randomly assigned treatment and control groups. The evaluative studies largely concluded that this CCT programme had effectively reduced the current poverty as well as enhanced the future of children through increased investment in their health and education (World Bank 2014).

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2.2.2 Brazil

According to World Bank report (1995)\(^{20}\) the proportion of population living below the poverty line ($1.25 PPP) was 17.4 per cent (24 million people) in 1990. In late 1990s the condition of the poorest Brazilians was pathetic. In 1991, the government of Brazil announced National Food Policy, which was considered a revolutionary step. This policy was broad in nature with multi-sectoral approach toward food security and right to food. But later on, the fight against poverty and hunger became a political priority. The UNDP’s Human Development Report in 2003 found that Brazil had the greatest inequality among middle income countries with score of 0.61 Gini value (1996-97). In 2003, poverty headcount ratio at national poverty lines was reached at its highest 24.9 per cent of population (World Bank – poverty and equity data Brazil).

In 2003, another revolutionary step was taken by the then President, Luiz Inácio Lula da Silva, with the implementation of Foam Zero (Zero Hunger) to eradicate hunger and extreme poverty in Brazil. In the same year, Bolsa Familia was introduced by combining the existing four programmes namely Bolsa Escola for education; the Foam Zero for food security, Bolsa Alimentação for health and vale gas for cooking gas subsidy. In 2006, one more existing Program for Eradication of Child Labor (PETI) was added to Bolsa Familia as an anti-child labour scheme. This merger reduced administrative costs and also eased bureaucratic complexity for both the families involved and the administrators of the programme.

It involved Conditional Cash Transfers (CCT) to the poorest families\(^{21}\) in situations of food insecurity. The conditions attached with the programme

\(^{21}\) The original income ceilings for eligibility to the Bolsa Familia programme were set at a fixed monthly per capita family income of R$100 (US$48) for ‘poor families’ and R$50 (US$25) for ‘extremely poor Families’. Presently income ceiling was raised to R$154 and R$77 respectively. The cash transfer amount was fixed as R$ 112 (US$ 55) for extremely poor and R$ 54 (US$ 27) for poor families per month regardless of household composition. Bolsa Familia gives a monthly stipend of SR 32 per vaccinated child (< 16 years old) attending school (up to 5) and R$38 (US$15 USD) per youth (16 or 17 years old) attending school (up to 2) to poor families. Furthermore, the programme gives the Basic Benefit of SR70 per month to extreme poor families. (http://www.mds.gov.br/bolsafamilia/noticias, accessed on 13/05/20 16)
were 85 per cent attendance for 6-15 years old children, 75 per cent attendance for 16-17 years old children and regular health check–up and immunization for up to six year old children and for pregnant women.

In December 2003 this programme covered about 3.8 million families and 15.7 million beneficiaries with a budget of 0.23 per cent of its GDP. It is a fast growing programme in terms of coverage of beneficiaries and has become one of the largest programme of its kind in the world. After ten years in 2013, the numbers families and people benefited under programme increased to 13.8 million and 50 million (one fourth of 198 million total population) with a budget of 0.6 per cent of Brazil’s GDP.

Can social policies go beyond assistance and become active tools of social and economic transformation? The answer of this question is provided by the result of this programme. Every household got a debit card and the Ministry of Social Protection ran a database with every transaction. As a result, the number of Brazilian families with income below $ 40 a month has decreased by more than 8 per cent every year since 2003.

*Bolsa Familia* is not only the largest but also the best targeted CCT scheme in Latin America, with 73 per cent of benefits reaching the poorest 20 per cent of the population, and 94 per cent falling within the lowest two quintiles (FAO, 2006). The absolute poverty in Brazil (defined as a household income of below one-quarter of the legal minimum wage) halved from 21 per cent of the population in 2001 to under 11 per cent by 2008 (IPEA, 2009). Between 2000–02 and 2005–07, the proportion of people living in hunger was reduced by one-third in Brazil (FAO 2011). Similarly between 2003 and 2009, the number of people living in poverty decreased by 20 million (United Nations High Level Task Force on the Global Food Crisis 2010) and poverty (PPP $2 per day) has fallen from 22 per cent of the population to 7 per cent (World Bank 2013). Due to its tremendous success, it has been referred to as a ‘Model of Effective Social Policy’ by a former World Bank president Paul Wolfowitz during his trip in Brazil in 2005.
2.2.3 Zambia

The policy of the Government of Zambia between 1964 and 1991 was aimed at ensuring food security through increased food production. High prices for various crops were ensured by introducing uniform prices for agriculture input and output.

But in 1991, it was decided to change the policy and Zambia started liberalizing agricultural production and marketing. The drought of 1992, contributed significantly to the worsening of conditions in Zambia; a number of other factors such as erratic rain, high prevalence of the HIV/AIDS population, unemployment etc. also resulted in a serious deterioration of food and nutritional security. HDI value declined from 0.42 in 1980 to 0.41 in 1990. Poverty as a percentage of population increased from 69.2 in 1996 to 72.9 in 1998. The incidence of poverty was as high as 83.1 per cent in rural areas and 56 per cent in urban areas. The proportion of children that were stunted - an important indicator of long-term exposure to food insecurity - increased from 40 per cent in 1991 to 53 per cent in 1998. By 1999, Zambia had been reclassified as a least developed country of the world (UNDP, 1999).

In 2003, Social Cash Transfer Programme (SCTS\textsuperscript{22}) was launched in Kalomo district (one of the total 104 districts in Zambia) of Southern province targeting 159 poor households. At that time, the population of the province had been experiencing high levels of hunger as a consequence of a drought and HIV/AIDS prevalence was also high. All targeted households received 30 ZMW\textsuperscript{23} (US$ 7.52) on a monthly basis while targeted households with children got an additional child bonus of 10 ZMW (US$ 2.5). In 2005 the scheme was expanded to Kazungula district and then to Monze in 2007, covering about 1000 households. Later on, the programme was extended to more districts. Since 2010, beneficiary households are being provided 55 ZMK (US$ 12) per

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\textsuperscript{22} SCTS is an unconditional cash transfer programme i.e. no conditions are attached to how the money can be spent.

\textsuperscript{23} The amount of social cash transfer scheme was equivalent to a 50 Kg bag of maize at that time.
month subject to bimonthly mode of payment. The number of beneficiaries has increased to 9,00,000 (6 per cent of total Zambian population) in 2015 from 1200 in 2003.

Under the impact of the Scaling Up Nutrition (SUN) movement in the country, SCTS was scaled up two times in 2013 and 2014. In 2013 the scheme was extended to 19 districts and covered 61,000 households and the budget was raised US$23.8 million. Again in 2015, it was extended up to 50 districts which covered about 180,261 households and budget raised to ZMW305 million (USD30 million).

Under the flagship of SCTS, Child Grant Programme (CGP) was launched in 2010 by Zambian government as a largest social protection programmes for children. It provides a monthly cash payment of 55 ZMK (US$12) to very poor households with per child under 5 years of age independent of the size of family. The cash transfers under this programme have improved household consumption, food consumption, diet diversity and food security.

There is robust evidence of a positive impact of the programme on the consumption of both food and non-food items though the impact was larger in magnitude for smaller households with five or fewer members (FAO 2014).

2.2.4 Jamaica

Jamaica is an example of a low income nation which achieved high level of human development very rapidly. In 1984, Jamaica switched from an expensive food subsidy to targeted food stamp programme. Under this program vulnerable groups were divided into four categories namely pregnant and lactating women; children under six years of age; people who were already getting poverty relief and public social assistance including elderly and

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24 The Scaling Up Nutrition (SUN) Movement Lead Group was established in 2012 by participating United Nations organizations and contributors/partners. The vision of the SUN Movement is a world without hunger and malnutrition.
disabled persons; and low income single parent and poor household. Food stamps\textsuperscript{25} were legal tender and could be used to purchase cornmeal, rice, milk, sugar, flour and meat. Programme was well targeted, but a major issue was that the real value of food stamp declined with inflation.

Consequently, in 2002 food stamp programme was replaced by the Programme of Advancement Through Health and Education (PATH)\textsuperscript{26}. Initially it was a pilot programme carried out in the administrative division of St Catherine in 2001 but within one year it became a national programme.

PATH provided two types of grants. The first was a health grant, which was subjected to certain members of the household attending public health clinics at regularly scheduled intervals. The second was the education grant, which was contingent on children aged 6-17 attending school for at least 85 per cent of the total number of school-days each month. The size of the grant was J$600 per month (US$10) per eligible beneficiary in the household. In 2014, the numbers of PATH beneficiaries increased to 3.7 lakh\textsuperscript{27}. PATH was the cornerstone of the social safety net reform recently implemented in Jamaica and represents one of the largest social programmes in the country (Ayala, 2006). Under the impact of PATH, the health care visits for 0-6 years old children increased by approximately 38 per cent and school attendance increased by approximately 0.5 days per month (Levy et al. 2007). “It is a delight to meet real people whose lives are being transformed daily, thanks to PATH. I believe this is the best way to assess the true impact of any program of social protection,” says Francesca Lamanna, Senior Economist in the Social Protection Sector at the World Bank.

\textsuperscript{25} Food stamps are legal tender and are accepted at commercial grocery outlets. The stamps can be used by retailers to purchase any commodity from wholesalers (including those not covered by the program). It greatly simplified the reclamation and retailers redeem the stamps at bank.

\textsuperscript{26} It was a Conditional Cash Transfer (CCT) programme jointly funded by the Government of Jamaica and the World Bank.

\textsuperscript{27} Data is taken from http://jis.gov.jm/ accessed on May 15, 2016
One of the most recent innovations in PATH was reinforcement of the safety mechanism in 2012. International Charity Donor ‘Food for the Poor’ (FFP), Jamaica and the Ministry of Labour and Social Security, signed a partnership agreement for the provision of housing solutions for poor Jamaican families who are PATH beneficiaries28.

2.2.5 South Africa

In 1990s, Government of South Africa provided a limited grant State Maintenance Grant (SMG) to the children below 17 years of age. Parents, who were divorced, widowed, abandoned by their spouse, had a spouse in jail or other institutions that ruled out working were also eligible for this grant. A household survey was conducted in 1990 and it was found that only 0.2 per cent of African children were receiving the benefits. Children living in rural areas were excluded due to lack of knowledge regarding the grant, inability to travel to application sites, administrative problems etc. As a result, one-quarter29 of young children were stunted and nearly one-fifth were underweight in 1994.

In 1995, the Government of South Africa established the Lund Committee to evaluate the current social protection system and submit its report to Ministers Committee for Social Welfare in September 1996. Political and legislative processes took another 14 months in implementation of Child Support Grant (CSG) in April 1998. This grant aimed to provide benefit to children in the poorest 30 per cent of households. Certain modifications to make the grant more accessible and increase the participation rate were introduced. The Child Support Grant was paid to the primary caregiver of the child at a level of R100 (18 USD)30 per month under age 7 years. Families earning a household income below R 800 (145 USD) per month in rural areas and below R1100 (200 USD) in urban areas were eligible to receive the grant.

29 Data is taken from Center Global Development cgdev.org accessed on May 15, 2016
30 Rand per USD was converted at 5.5 in 1998, 8.2 in 2012 and 13 in 2017.
In 2012, the grant amount was revised to R 280 (34 USD) per month and threshold income limit was set at R 2800 (341 USD) per month for single caregivers and R 5583 (680 USD) per month for married couple. In the same year, the age limit was increased to 18 years and the number of children covered by programme also increased to 11 million. In April 2017, grant amount increased to R380 (29USD) and threshold income limit was set at R 3800 (292 USD) per month for single caregivers and R 7600 (584 USD) per month for married couple and beneficiary coverage reached to 12.3 million in 2017\textsuperscript{31}.

This programme significantly improved the nutritional value, education and health care among targeted children. The grant appears to have improved the quality and quantity of food in recipient households, children's nutrition and enhanced the growth (Williams 2007). The Child Support Grant generates positive developmental impact that multiplies its benefits in terms of directly reducing poverty and vulnerability (Samson et al 2012). The children benefiting from the grant were 3.5 cm (on average) taller than other children (ILO 2016).

2.2.6 Sri Lanka

Tsunami in December 2004 in Sri Lanka resulted in more than 38,000 deaths and approximately 7,000 people were missing. The government estimated that at least 1 million people were directly or indirectly affected, of whom about 500,000 were displaced. To assist the victim of tsunami an experiment was conducted by World Food Programme (WFP), Oxfam (GB) and the International Food Policy Research Institute (IFPRI), through a unique collaboration in order to analyze the relative efficiency and impacts of in-kind and cash transfer programme in emergency. These institutions launched a Cash Transfer Pilot Project (CTPP) in 2005 after tsunami. The key objective was to

compare the impact of cash and food transfers on beneficiary households’ food and livelihood security and on the local economy. A wider objective was to learn how best to determine the feasibility and appropriateness of cash-based programmes in emergency food security assessments. Under this project, 12000 people were provided cash transfer and 3 lakh people received ration for three months between October / November 2005 and January 2006.

The amount of cash disbursed was equivalent to the local market value of the WFP food ration, taking into consideration average seasonal market price fluctuations in the area. The total transfer value amounted to Rs 150 (US$ 1.5) per beneficiary per week. The CTPP has undertaken comparative analysis of household expenditure in cash receiving and food-receiving households over a three-month period.

The main key findings of this pilot project were as follows:

1. Cash transfer was more cost-effective and preferred by beneficiaries in the areas where markets were functioning and accessible. But food-aid was more cost-effective and preferred by beneficiaries in those areas where markets were less functional or accessible and in situations of high and unpredictable inflation.

2. The appropriateness of cash transfer depends on a safe and secure environment (not disturbed by The Liberation Tigers of Tamil Eelam - LTTE activities).

3. Cash beneficiaries diversified their diet and bought non-food items

4. The cash disbursement system was more cost-efficient (5 per cent cheaper) than the food system in all geographical areas.

The pilot project findings are largely similar to those of projects elsewhere for example in Kenya, Bangladesh etc.

An overview of economic status and prevalence of undernourishment in six countries is shown in Table 2.1.
Table: 2.1 Population, GDP per capita and prevalence of undernourishment (% population)

<table>
<thead>
<tr>
<th>Country</th>
<th>2003 Population (Million)</th>
<th>2003 Per capita GDP (USD)</th>
<th>2003 Prevalence of undernourishment (% population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil Bolsa familia (2003)</td>
<td>182.5</td>
<td>3059</td>
<td>15.1</td>
</tr>
<tr>
<td>Mexico Progresa (1997)</td>
<td>105.6</td>
<td>6751</td>
<td>5.4</td>
</tr>
<tr>
<td>Zambia SCTP (2003)</td>
<td>11.42</td>
<td>429</td>
<td>48.2</td>
</tr>
<tr>
<td>Jamaica PATH (2002)</td>
<td>2.7</td>
<td>3465</td>
<td>6.6</td>
</tr>
<tr>
<td>S. Africa SCG (1998)</td>
<td>46.42</td>
<td>3775</td>
<td>5.0</td>
</tr>
<tr>
<td>Sri Lanka CTPP (2005)</td>
<td>19.08</td>
<td>989.45</td>
<td>15.1</td>
</tr>
<tr>
<td>2015 Population (Million)</td>
<td>206.0</td>
<td>8757.21</td>
<td>10.8</td>
</tr>
<tr>
<td>2015 Per capita GDP (USD)</td>
<td>125.9</td>
<td>9143.13</td>
<td>5.0</td>
</tr>
<tr>
<td>2015 Prevalence of undernourishment (% population)</td>
<td>16.1</td>
<td>1313.89</td>
<td>47.2</td>
</tr>
<tr>
<td></td>
<td>2.87</td>
<td>4965.99</td>
<td>8.1</td>
</tr>
<tr>
<td></td>
<td>55.01</td>
<td>5769.77</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>20.9</td>
<td>3844.89</td>
<td>10.8</td>
</tr>
</tbody>
</table>

(Source: https://data.worldbank.org/indicator/NY.GDP.PCAP)

It is clear from the table that prevalence undernourishment (per cent population) decline satisfactory in Brazil and Sri Lanka, marginally in Mexico and Zambia and remains constant in South Africa but increase in Jamaica between 2003 and 2005.

2.3 INTERNATIONAL STUDIES

To analyze the comparative outcomes of various CCTs in different countries Rawlings and Rubio (2005) have evaluated the CCTs programmes in six countries and present the results of three programmes namely Progresa in Mexico, Familias en Acción (FA) in Colombia, and Red de Protection Social (RPS) in Nicaragua; and new generation programme which include Family Assistance Program (PRAF) in Honduras, Program of Advancement through Health and Education (PATH) in Jamaica, and Social Solidarity Fund (SSF) in Turkey. They presented results of first generation programmes only.

They divided programmes in two categories- first generation programme which include Progresa in Mexico, Familias en Acción (FA) in Colombia and Red de Protection Social (RPS) in Nicaragua; and new generation programme which include Family Assistance Program (PRAF) in Honduras, Program of Advancement through Health and Education (PATH) in Jamaica, and Social Solidarity Fund (SSF) in Turkey. They presented results of first generation programmes only.

Progresa was a conditional cash transfer programme launched by Mexican government in 1997. It focused on three main social components namely health, education and nutrition.
Protection Social (RPS) in Nicaragua. They conclude that cash transfer has constructive impacts on both consumption levels and human capital development. In Mexico, just after one year of inception of programme Progresa, the average consumption level increase by 13 per cent points, and the value of food consumption was found to be 11 per cent higher in Progresa households compared to non-Progresa households. It also promoted higher expenditures on fruits, vegetables, and animal products. In Progresa households, the caloric intake per person was observed to be 7.8 per cent points higher than non-Progresa households. In Colombia also, FA (Familias en Acción) households showed improved dietary intake. In Nicaragua, consumption levels remained unchanged under RPS (Red de Protection Social) despite deteriorated economic conditions due to low coffee prices and a drought. Another study by the IFPRI (2002) also found that under the impact of RPS, the rate of timely immunization among children 12–23 months old increased by 18 per cent points in the treatment group compared with the control group. Thus conditional cash transfer programmes were found to help the poor people by shielding their consumption level during the time of crisis and improving them during normal times.

A similar comparative research is carried by Handa and Davis (2006) in which they examine six CCT programmes namely Oportunidades in Mexico, Bolsa Escola in Brazil, Programa de Asignación Familiar II, (PRAF II) in Honduras, RPS in Nicaragua, Programme for Advancement Through

34 Familias en Acción (FA) was a conditional cash transfer programme launched by Colombian government in 2001 and financed by the World Bank.
35 Red de Protection Social (RPS) was a social protection network programme launched in Nicaragua, 2000. It was implemented in two phases extending over 7 years with a total budget of $ 33 million.
36 In 2001, Progresa was renamed as Oportunidades and some of its objectives and operational features were changed.
37 Bolsa Escola (school grant) was focused mainly on child education. So it had considerable effect on reduction of child labour.
38 In Honduras, PRAF was started in 1991 with the aid of IDB. It involved distribution of cash coupons as an income supplement to improve food security. But PRAF failed due to inaccurate and politicized targeting. Later on, PRAF II was introduced in 1998 as part of a sector-wide modernization and strengthening of the food security. PRAF II was merged with PRAF III in 2006.
Health and Education (PATH)\textsuperscript{39} in Jamaica, and Familias en Acción in Colombia and presented the results of five programmes except PATH\textsuperscript{40}. This study observed that the outcomes of four programmes, except Bolsa Escola, were encouraging with regards to achievement of the short run objective of increasing the food consumption. These programmes had a significant positive impact on the food purchases and caloric availability. But the study found mixed results when it analyzed the impact of the programmes on human-capital development. Progresa and RPS were found to be successful in reducing the stunting among the beneficiary population, but not PRAF II, while Familias en Acción reduced the incidence of stunting among the youngest children. This study indicates that all the CCTs successfully fulfilled the objective of increasing the food consumption but showed varying result on stunting among children.

Hall (2008) has examined the impact of Bolsa Familia in Brazil on poverty. According to this study Bolsa Familia is not only the largest but also the best targeted CCT scheme in Latin America and it reduced the absolute poverty by 19 per cent between 2003 and 2005. Furthermore, the household income of the poorest 10 per cent people increased by 23.5 per cent in 2004 as compared to 2001. Another study by FAO (2006) also recorded that 73 per cent\textsuperscript{41} of benefits were received by the poorest 20 per cent of the population in Brazil. Thus the CCT programmes were found to be effective in reducing poverty in the short term but at the same time there is a possibility of developing a culture of dependency among the poor on government aid and transfers. Further Hall also expressed his concern about the risk regarding operational problems of targeting, general effectiveness in reducing deep rooted poverty and the quest for short-term political advantage at the expense of long-run investment into social infrastructure.

\textsuperscript{39} Programme for Advancement Through Health and Education (PATH) was launched by Jamaican government in 2001 as a pilot project but later it was extended to national level.

\textsuperscript{40} The results of PATH were not presented due to non-availability of official data.

\textsuperscript{41} This percentage of delivery of benefits is noted highest in Brazil (73) Compared to Nicaragua (55 per cent), Honduras (43 per cent), and Mexico (32 per cent).
On the cost effective issue of the CCTs, Standing (2008) examined a pilot project namely Social Cash Transfer Scheme (SCTS) in Kalomo district of Zambia. The study noted that this scheme was more cost effective and estimated that if it were extended to assist poorest 10 per cent of all Zambian households; the cost of scheme would be merely 0.5 per cent of its GNP which seems financially feasible. It is much cheaper than food aid and has the advantages of going directly to the poor and vulnerable people without high administrative cost and other costs associated with food aid schemes. Moreover, food aid scheme distort the local food markets by deterring local producers whereas cash transfer stimulates local producers. Another simulation study by the DFID (2005), supports the fact that 70 per cent of all social transfer was spent on local produced goods and services. Further, the study stressed that cash transfer not only raised consumption levels but also supported the poor people to control their debts during crop failure and rebuild their assets.

Another comparative research regarding the impact of the CCTs on food consumption and nutrition among children in five countries namely Brazil, Mexico, Nicaragua, Colombia and Honduras was undertaken by Leroy et al. (2009). This research shows that the CCTs programmes in these countries provide a potentially powerful delivery mechanism for improving child nutrition. There were positive impacts on core and immediate determinants of child nutrition’s assessed factors like food security and diet quality, women’s knowledge, use of health and education services etc. Further, it is noted that the effects of these programmes are bigger for height compared to weight indicators for children exposed to the programme at younger ages. In comparative analysis, the study observed a positive impact on the consumption of fruits and vegetables in Mexico, Nicaragua and Colombia, small impact in Brazil but no such impact in Honduras. This difference is largely due to difference in size of transfers. The size of transfer was large and varied between 15-25 per cent of total household expenditures in Mexico, Nicaragua and Columbia compared to 4 per cent in Honduras and 8 per cent in Brazil.
To see the impact of the CCTs on consumption level among poor people, Rocha (2009) in her analytical study, examined the impact of innovative policies on food and nutritional security in Brazil. This study observes that effective implementation of Bolsa Familia\textsuperscript{42} programmes improve the consumption level among poor people. Further, the research estimated that Bolsa Familia along with two programmes: school meal programme and food procurement programme significantly reduced the incidence and severity of poverty. Under the impact of these programmes, the proportion of underweight children under two years declined from 12.7 per cent in 2000 to 3.5 per cent in 2006 (72.4 per cent reduction in six years). Another study by the UNICEF (2008) supports the fact that the proportion of children with malnutrition in semi-arid region of northeast of Brazil declined from 17.9 per cent in 1996 to 6.6 per cent in 2005.

Millar et al. (2009) have evaluated the Social Cash Transfer Scheme (SCTS)\textsuperscript{43} in Mchinji district of Malawi. This empirical study observed that under the impact of programme, the proportion of stunted children decline from 55 per cent in 2007 to 46 per cent in 2008 in beneficiary households, but remained same as 55 per cent in the control group. On the other, proportion of wasted children declined from 16.2 per cent in 2007 to 7.2 per cent in 2008 in beneficiary households, and from 13.7 per cent to 6.9 per cent in non-beneficiary households during same the time period. Therefore, it can be inferred that the SCTS was successful in reducing percentage of stunted children but not of wasted children.

\textsuperscript{42} Bolsa Familia (Family Grant) is a highly targeted, conditional cash-transfer programme. It was created in 2003 as an amalgamation of a number of previously existing programmes which targeted the poorest families in Brazil. It provides a conditional monthly transfer to poor households who earn less than R$120 (US$68) per capita monthly with children up to seventeen years of age and/or a pregnant woman with up to a maximum of three children.

\textsuperscript{43} In 2006, Social Cash Transfer Scheme (SCTS) was launched by Government of Malawi as the primary poverty-reduction tool targeted on the country’s most destitute households where an amount of 12 USD per month was transferred to the beneficiary household size of 4 members. In 2012, it covered 300,000 households and its budget expenditure increased to US$60 million per year.
In a similar study, Soares et al. (2010) evaluate the impacts of Bolsa Familia in Brazil. This study found no significant impact on aggregate consumption, nutrition and health but a considerable effect on the share of total household expenditure spent on some other important items like food, education and children clothing. The study argues that increase in food expenditure does not necessarily imply improvements in child or adult nutrition because such an outcome depends on the quality of the household diet. Further, study suggested that cash transfers had a significant positive impact on poverty reduction, school attendance and adult labour force participation especially in women due to decline in child labour.

In another empirical study on the issue of cost effective scheme, Hoddinott et al. (2013) analyze cash transfer programme in Niger and conclude that food transfer cost is 15 per cent higher than cash transfer -where both food and cash transfer programmes were undertaken with same degree of frequency and timeline in poorest areas of the country. However, food basket has a clear advantage in achieving short run objective of immediate food security and dietary diversity compared to those receiving the cash transfer. The cash recipients have less diverse diets due to their preference of purchasing grains in bulk, uncertainty regarding future food prices etc. Beside this, households receiving cash spent more money on repairing their dwellings in wake of rainy season and on agricultural inputs during the growing season.

Seidenfeld et al. (2014) investigate the impact of Zambian Child Grant Programme (CGP) on food consumption and anthropometric measures for children under five years. This empirical study observed positive effect of the

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44 Severe food crises affected parts of Niger in 2005-2006 and 2010. A cash transfer project was implemented by Government of Niger with the aid of World Food Programme for six month in April 2011. The cash payment was about 2USD per day but not more than 50USD per month where as food basket contained 3.5 kg of grain, 0.72 kg of pulses, 0.14 kg of vegetable oil and 0.035kg of salt per day to an average household size of seven people.

45 CGP (Child Grant Programme) is one of the Zambia’s largest social protection programmes launched in 2010 and aimed to improve health and nutritional status of young children. The programme provides a monthly cash payment of 60 kwacha (USD 12) to very poor households with children under five years old.
programme on household consumption and diet diversity among children. The per capita consumption increased by 15.18 Kwacha per month because of the programme. Out of this amount, 11.60 Kwacha (76 per cent of additional consumption) was spent on food. As a result of this programme, the number of households eating more than one meal a day increased by 8 percentage points and the number of households not severely food insecure increase by 18 percentage points to 97 per cent within two years (Oct 2010-Oct 2012).

**Table 2.2 Overview of some important research studies on CCTs**

<table>
<thead>
<tr>
<th>Study</th>
<th>Programme</th>
<th>Findings</th>
</tr>
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<tbody>
<tr>
<td>Rawling and Rubio (2005)</td>
<td>Progresa (Mexico) FA (Columbia) RPS (Nicaragua)</td>
<td>Constructive impacts on both consumption levels and human resource development, improvement in food diversity</td>
</tr>
<tr>
<td>Handa and Davis (2006)</td>
<td><em>Oportunidades</em> (Mexico) PRAF II (Honduras) PATH (Jamaica) FA (Columbia)</td>
<td>Positive impact on the food purchases and caloric availability, positive impact on food consumption, the reduction in child stunting is varying from country to country</td>
</tr>
<tr>
<td>Hall (2008)</td>
<td><em>Bolsa Familia</em> (Brazil)</td>
<td>Considerable reduction in absolute poverty in Brazil</td>
</tr>
<tr>
<td>Standing (2008)</td>
<td>SCTS (Zambia)</td>
<td>More cost effective (compared to food basket), Supported poor people to control their debts during crop failure and rebuild their assets.</td>
</tr>
<tr>
<td>Leroy et al. (2009)</td>
<td>CCTs in Brazil, Mexico, Nicaragua, Colombia and Honduras</td>
<td>Positive impacts on core and immediate determinants of child nutrition; effects varying across countries due to difference in size of cash transfer</td>
</tr>
<tr>
<td>Soares et al. (2010)</td>
<td><em>Bolsa Familia</em> (Brazil)</td>
<td>Positive impact on poverty reduction, school attendance and adult labour force participation</td>
</tr>
<tr>
<td>Hoddinott et al. (2013)</td>
<td>Cash transfer and in-kind programme in Niger</td>
<td>Cost effective but less food diversification due to bulk purchase of food</td>
</tr>
<tr>
<td>Seidenfeld et al. (2014)</td>
<td>Child Grant Programme (Zambia)</td>
<td>Positive impact on per capita consumption, improvement in diet diversity</td>
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</table>
The consumption pattern also underwent change as the consumption intake shifted from roots and tubers to protein, indicating an improvement in diet diversity. Further, the study analyzes the impact of clean water and mother’s education on stunting and the outcomes are encouraging in that stunting was reduced by 9 percentage points among children who had access to clean drinking water compared to children without access to clean water and 1.2 percentage points for each additional year of their mother’s education.

2.4 INDIAN STUDIES

This section delves into the vast literature available on the PDS system and related issues in India. From the discussion of various international studies and case studies in sections 2.2 and 2.3; it is observed that the CCTs are very popular and successful programmes in Latin American and Caribbean countries. This led to a debate in India also as to whether to reform the existing mechanism of delivery through the PDS or to replace it with cash transfer. Some of the significant studies related to the various aspects of food security either through the PDS or cash transfers are discussed. We have divided Indian studies into two sub-sections:

2.4.1 Related to the general issues of food security

2.4.2 Related to distributional issues with special reference to the PDS

2.4.1 Studies Related To the General Issues of Food Security

This section review the studies related to the general issues to food security like self-sufficiency in production, food management, food inflation, limited purchasing power, integration of the PDS with employment generating programmes, administrative inefficiency etc.

Sen (1981) in his path-breaking study drew a distinction between self-sufficiency and food security. He observed that right to food is the main issue related to the household level food security in a society. Increased agricultural production in developing countries had increase self-sufficiency in agricultural
products at macro level but undue emphasis on aggregate food availability diverts the attention from most basic issues of how particular individuals and groups of people gain access and control over food. He argued that people were facing starvation in the midst of plenty of food in India. In the absence of safety-net programmes, per capita availability of food grains exceed what they could buy in the market due to low income. As a result, access to food came down. Further, the purchasing power under food inflation due to artificial shortage of food grains declines. In such situation, the influence of change in food price on real income and poverty rates became a significant determinant of food insecurity.

Jiggins (1986) in his study analyzed the Employment Guarantee Scheme in Maharashtra and Food for Work programme in Bangladesh. There was an unexpectedly high proportion of women turning out to work in this schemes. Further, the lean season was characterized by low availability and high prices of food grain. The study also found that female headed households were more resilient to seasonal stress and amongst the most vulnerable. Diversification and wider choice of crop, live stock and income earning activities were required to reduce the risk of adverse seasonal effects. Food aid to vulnerable people and Food for Work programme were found to be the important components of a relief programme to cope with the adverse seasonal effects.

Venugopal (1992) in his study has argued that India has achieved food security at the national level but has failed to achieve it at the household level. This is obvious from the fact that there were mounting food grains stocks with the FCI, but at the same time chronic starvation deaths were occurring in different states of India. The rural poor have not been benefitted to any significant extent by the present Public Distribution System. The study highlights the need for involvement of community in food management. The pre-occupation with maintenance of price stability for the urban consumer and holding buffer stocks as an insurance against future fluctuations in food
production was a hurdle instead of an advantage, in the way of realizing household level food security.

**Radhakrishna and Rao’s (1994)**, study attempt to find an alternative to the PDS in view of its shortcomings. It was observed that labour households account for a large proportion of food insecure population. Therefore, they suggested increasing the employment opportunities in order to enhance the food security of poor section. They also recommended integration of the PDS with employment generating programmes and indicate that targeted food subsidies might yield welfare gains for these sections.

**Bhalla (1994)** in his study suggested two main strategies to meet the acute food shortage in the country. The first one is accelerating growth in food production through substantial investment in rural infrastructure to raise the level of productivity. The second is a system of procurement, storage and public distribution of food grains with the main objective of providing food to consumers at reasonable prices and maintaining price stability in the open market. One more component of food management is food stocks, which enable the functioning of the PDS and help in stabilizing the price in market.

**Parikh (1997)** in his study at national level says that a measure of food security would be production and availability of food grains. Average per capita availability of food grains is an indicator of food security at the national level but at the household level, food insecurity is mainly due to poverty and lack of employment opportunities. He advocates a national level Employment Guarantee Scheme (EGS) with increased wages and easy access to all individuals for achieving food security against both chronic and transient hunger. Investment in education and employment generating infrastructure would be long term solution of core economic growth but Parikh does favor the PDS for reduction in food insecurity in the short run.

**Ramaswami and Balakrishnan (2002)** have analyzed the inefficiency of state institutions in controlling food prices and managing public distribution
system with improvement in quality of the products, supply chain and recipient’s status. The study demonstrates that the demand switches will not occur as long as the market price of food grains remains higher than the subsidized grains. Quality of the product becomes the determining factor when the price of the open market is similar to that of the subsidized commodities. The state needs to coordinate the price factor as well as the quality of the grains in order to improve procurement.

**Deaton and Dreze (2009)** in their study attempt to analyze poverty and nutrition in India (on the basis of NSS data of various rounds between 1983 and 2004). In rural area, household per capita calorie consumption has decline from 2,240 calories in 1983 to 2,047 calories per head in 2004-05 (a decline of 8.6 per cent from 1983) and urban per capita calorie consumption decline from 2070 to 2021 (a decline of 2.4 per cent) during the same period. The decline of per capita consumption was not limited to calories but to proteins and many other nutrients also. The major exception is fat consumption, which was increased steadily in both rural and urban area during this period. Further, the proportion of underweight children remained unchanged between 1998-99 and 2005-06 but the stunting decline significantly from 51 percent to 45 per cent during the same period (based on NFHS -2, NFHS-3). The study suggest for an urgent need for better nutrition monitoring arrangements.

**Ghosh (2011)** argues that if cash transfer is targeted, then the familiar problems of unfair exclusion, unjustified inclusion, large administration costs, possibilities of leakage and diversion all become significant. However, there are two immediate problems related to cash transfer approach. First, what ensures that the amount of the transfer will be sufficient to fully compensate for any price increases in the newly deregulated markets of these goods? Second, how will the government ensure that the cash transfer actually goes to the intended beneficiaries?
She states that the success stories of Brazil’s Bolsa Familia and Mexican Oportunidades programme are based on the pre-existing public delivery systems of health, nutrition and education. Moreover, literatures show that cash transfers are less effective during inflation; a high inflation especially in food items erodes the value of cash transfer. She feels that cash transfers could not be a substitute of the PDS but it can be used to increase the supplementary income of the poor people.

Khera (2011) examined the Government of India’s 1997 criteria for selection of households below poverty line. She found that throughout the country the criteria are static and uniform. She found that one-third of the beneficiaries categorized as the BPL were wrongly included and 44 per cent of the eligible households were excluded. She raises questions about the practice of using uniform criteria throughout the country without any attention given to diversity in various geographic and socio-economic indicators. She indicated that the exclusion of eligible households in the BPL list has been done by the State Government in order to match the poverty targets set by the Central Government Census. She also found a positive correlation between possession of a BPL card and being disadvantaged in several fronts.

Svedberg (2012) in his study at national level estimated that 63 per cent of the poor households were not covered by the system, indicating a substantial exclusion error (NSS survey 2007). About 62 per cent of all BPL and AAY cards were in the hands of non-poor households, indicating a large systemic inclusion error. He also analyzed the case for and against to replacing a reformed version of the current PDS with a targeted and differentiated cash transfer scheme. He expressed his concern about providing unconditional cash to poor households will reduce the labor supply and may lead to inflation but increase nutritional intake among the poor. He suggested a targeted and differentiated universal cash transfer scheme based on bio-metric UID cards to curb the ghost cards.
SEWA BHARAT (2012) in a study on a pilot project on cash transfer in Ragubir Nagar in Delhi did not find any evidence that cash transfer increase has increased food security and reduced malnutrition. The major issue was lack of financial inclusion even in urban areas; very few people had bank accounts. The situation was worse in case of women. The shifting from food to cash would mean leaving a large number of the most vulnerable from the food security system.

Standing (2012) in his theoretical study advocated the universal cash transfer for promoting better and greater use of public social services. Cash transfer works best in free and organized market. It cannot work in isolation and should be used with other social policy. Therefore cash transfer cannot be seen as purely an alternative to the PDS in food security policy. He claims that there is no statistical method that works with the perfect accuracy. Whatever the methodology is used, there will be substantial errors of exclusion and inclusion. These errors might be possible in cash transfer as well.

Khera (2013) analyzed whether or not a programme like Bolsa Familia is feasible. The proportion of population living under PPP $1.25 per day ranged between 20 and 42 per cent in India but in Brazil it was less than 10 per cent in 2005-06. Further, only 14 per cent of population in Brazil is in rural areas while in India this percentage is 70 per cent. The comparative numbers on nutrition-related indicators are even more striking. Nearly half of Indian children under three were underweight in 2005–06 compared with 2 per cent in Brazil (in 2007). Further, essential features of Bolsa Família are often overlooked in India. The cash transfer in Brazil is tied to availing of education and medical facilities. In India, the success of cash transfer seem doubtful with poorly developed rural market, poor banking facilities, intra household inequality and gender and other infrastructural constraints. Beside this, she has also expressed

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46 Bolsa Familia is a Conditional Cash Transfer programme where a specific numbers of conditions are to be fulfilled to gain the benefit.
her concern over inflationary nature of cash transfer especially where supply of food grains is inelastic.

**Himanshu (2014)** in his study at national level discussed the issue related to cash transfer and in-kind transfer in India. The study found out that a large part of the problem in beneficiary selection for food security is not only due to wrong targeting but also because of the arbitrary capping of beneficiaries by the Planning Commission. The PDS system is performing satisfactory in some states where it is universal (with extra efforts of state government) with low price and least leakages. 80 per cent of actual beneficiaries were satisfied with the PDS except Bihar (NCAER 2010). The study revealed that if the choice has been given between an in-kind transfer and a cash transfer, then in-kind transfer would be better because same amount of transfer increases the calorie consumption by two times in the PDS compared to cash transfer. The way out is reforming the existing PDS, not to replace it with cash transfer. He quotes that cash transfer for food in India, is barking up the wrong tree.

**2.4.2 Issue of Distribution with Special Reference to the PDS**

This section review the studies related to the issues specifically to the PDS functioning like targeting error, PDS off-take, leakages, biasness, diversion of food, viability of the FPSs, political intervention etc.

**George (1996)** says that the amount of food subsidy depends on a number of factors such as procurement volume, PDS off take, storage levels and efficiency, gap between issue price and procurement price, handling efficiency of the various organizations. This study suggested to reduce the leakages, effective targeting, increase the efficiency of handling operations, especially the operations of the FCI. PDS has been criticized on three grounds namely (1) there is a sectoral bias towards urban areas; (2) there is a regional bias and (3) the leakage in the system introduces class bias especially when it does not provide food security for the poor class.
The Tata Economic Consultancy Service (2000) conducted a study at national level covering all states, to know how much the PDS supply was diverted from the system. It was found that there was a diversion of 36 per cent in wheat supplies, 31 per cent in rice and 23 per cent in sugar. In the case of rice in Bihar and Assam the extent of diversion was as high as 65 per cent. In the case of wheat the diversion ranged from 10 per cent in Nagaland to 69 per cent in Punjab. The study found no correlation between the frequencies of the use of Enforcement Acts and extent of diversion. In Northern Region, Uttar Pradesh had more diversion of rice and sugar despite a higher number of raids and convictions.

Dutta and Ramaswami (2001) in their study show that in terms of quantities of PDS off take, Andhra Pradesh (AP) programme is two tomes that of Maharashtra programme. They found that about 50 per cent of the difference in utilization rates was due to differences in geographical coverage. The poor in AP were benefitted more in all respect than their counterparts in Maharashtra. The reason was that the coverage of the programme was universal in AP, but in Maharashtra nearly 30 per cent of the poor were excluded from the system. Errors of exclusion were much lower in AP and especially in its rural parts. The non-poor also received sizeable subsidy benefits in rural AP. Errors of inclusion were higher in rural sector of both AP and Maharashtra. The study suggests that government must consider alternative institutional arrangements for delivering food economically. They recommend inclusion of food stamps and greater involvement of private agencies in the procurement and distribution of subsidized grain. Further, this study proposes that combining these institutional reforms with several self-targeted schemes seems the best way to maximize the efficiency of the PDS in distributing subsidies to the poor.

Mooij (2001) investigates why the Public Distribution System failed in the undivided Bihar. Political involvement in misallocation of funds, distribution of cards, provisions of licenses etc. led to a system of wide spread
anarchy and institutionalized corruption, the roots of which are very difficult to tackle. Open involvement of mafia, rangdars, and purposeful blindness of the bureaucrats is a major reason for disempowering the poor and marginalized families who are the rightful recipients of the services. It calls for an urgent reform in the political and socio-economic conditions of the state to ensure that the benefits reach the targeted population.

A study by the Planning Commission (2005) found that about 58 per cent of the subsidized food grains issued from the Central Pool did not reach the BPL families because of identification errors, non-transparent operations and corrupt practices in the implementation of TPDS. There were errors of inclusion of ghost cards and non-BPL households. As a result, only 57 per cent of the BPL households were covered. Over 36 per cent of the budgetary subsidies on food were siphoned off the supply chain and another 21 per cent was reaching the APL households. Only 42 per cent of subsidized grain issued from the Central Pool reached the target group. The FPSs were generally not viable because of low annual turnover and most of them remained in business through leakages and diversions of subsidized grains.

Swaminathan (2008) in his empirical study on Tamil Nadu and Kerala indicates that universal PDS is better than targeted one. It was observed that a large number of poor households were pushed out of the PDS (in the name of efficiency by means of narrow targeting). A large proportion of agricultural labour and other manual labour households, households belonging to the scheduled castes and tribes, households with little or no land, and households in the lowest expenditure classes, were excluded from the PDS (on the basis of data conducted by NSS in 2004-05). The large exclusion of the genuinely needy persons from the PDS adversely affects the functioning of the system and led to a collapse of the delivery system. Further it has failed to achieve the objective of price stabilization through transfer of cereals from surplus to deficit regions of the country.
Khera (2011) in her study analyzed 55th round (1999-2000) and 64th round (2007-2008) NSS data, and concludes that at the beginning of the period 24 per cent of food grains was diverted. The situation was worse until 2004-05 when 54 per cent food grains was diverted, but at the end of period (in 2007-08), 44 per cent of PDS food grains was diverted at all India level. In some states food grains diversion declined vary rapidly. In Chhattisgarh, food grains diversion declined from 52 per cent in 2004-5 to 11 per cent in 2009-10. Similarly, in Orissa, diversion came down from 76 per cent to 30 per cent in the same period. The diversion of food grains became less than 10 per cent in some states like Tamil Nadu, Andhra Pradesh etc.

Himanshu and Sen (2011) in their empirical study at national level (based on NSS data 1993-94 and 2004-05) estimated that leakage in rice increased from 19 per cent in 1993-94 to 40 per cent in 2004-05 and in case of wheat, it went up from 41 per cent to 73 per cent during same period. The food grains (both wheat and rice) diversion increased from 28 per cent in 1993-94 to 54 per cent in 2004-05. The targeting was responsible for the problem of leakages. They suggested that food security cannot be attained without addressing issues of physical availability, distribution and stock management with efficiency and efficacy.

Dutta and Ramaswami (2011) in their study compare the functioning of two states namely Andhra Pradesh and Maharashtra, based on 50th round of National Sample Survey, Household Consumption Survey data. The study indicates that there was a problem in utilization of commodities, targeting of population, magnitude of income transfers and cost effectiveness of food subsidies. A significantly higher number of people used the PDS in Andhra Pradesh compared to Maharashtra and the coverage was higher by 30 per cent in Andhra Pradesh due to universal system. The study further suggested incorporation of best practice to improve the system other states also.
Gupta (2011) in her study says that there is a need of universal system rather than targeted one. The present TPDS system has four main constraints namely supply of food grains, finance, political and governance. One hundred million of cereals are required for a universal PDS (with 80 per cent off take and 35 kg per household), which is 57 per cent of total production. Currently, procurement is about 30 per cent of production. It has a good scope of progress. India’s tax-GDP ratio is very low (around 18 per cent compared to 28 per cent for USA and around 45-50 per cent for Scandinavian countries). As far governance and political constraint are concerned, universal system is successful in Tamil Nadu, Chhattisgarh and Andhra Pradesh. So it is better to include everyone since the exclusionary system will only work against the poor.

Kattumuri (2011) in her analytical study on comparing the performance of food security programmes in various countries and TPDS in states of India, she concluded that public distribution schemes in Bangladesh, Cambodia and Pakistan helped the girls in their education (Ahmad et al. 2007). Bolsa Familia, in Brazil recorded better performance than the CCTs schemes in other countries. The strong political commitment played an important contribution in the success of this programme. She observed that the performance of TPDS in India is relatively poor in states having high number of BPL families. The lack of co-ordination between national and village level administration further obstruct its performance. The performance of the PDS not only varies across states but rural and urban areas also. She therefore suggested for creating greater awareness among beneficiaries through information and communication.

Jha, Gaiha, Pandey, and Kaicker (2013) conducted a comparative study on the functioning of the PDS in three states, namely Andhra Pradesh, Rajasthan and Maharashtra. The study considered the factors like subsidy, targeting, the involvement of the poor etc. and revealed that the programme in all the three states was not well targeted. So, subsidy benefits were received by
both poor and non-poor. The study suggested that better network of Fair Price Shops, higher margin of the PDS price with the market price, adequate supply, efficient procurement, storage and distribution and prioritizing livelihood expansion opportunities might ensure food security.

**Parikh (2013)** in his study highlighted the problem of exclusion in the PDS. The study estimated that poor got just 10 per cent of the total subsidy expenses of the government. More than 40 per cent of the PDS grains did not reach to the poor. To raise the efficiency in the PDS system, he suggested the use of food coupons as discussed by the *Economic Survey 2009-10* (GoI 2010). He advocated for increasing the role of banking to boost the food security through food coupons. A person can go to any shop and buy food items at market price paying part of the cost through food coupons. These coupons would reduce the diversion of the PDS food grains.

**Jha and Acharya (2013)** in their study explored the flaws of present PDS system and addressed the various implications related to the National Food Security Bill (NFSB) 2011 with greater focus on the issues of financing for ensuring food security for all. They argued that the notion of universal PDS and ‘common issue price’ could be a possible way to reduce leakages and misappropriation of commodities. Looking at the enormity of food insecurity and hunger in India, they favored universal PDS. The study further advocated for having a corruption free, efficient and accountable system along with better infrastructure, systemic reforms, inclusion of new outlets, monitoring of service provisions, decentralization of distribution, grievance redressal mechanisms etc. They also pointed out the success of universal system in Tamil Nadu, and near universal system in Chhattisgarh and Andhra Pradesh.

**Himanshu and Sen (2013)** in their empirical study explored the importance of the PDS in food security. They states that the efficiency of the PDS can be judged by the fact that in spite of drought and high food price inflation, the poverty head count ratio declined by 30 per cent and squared poverty gap by 52 per cent during 2004-05 to 2009-10. Further, by citing the
example of Tamil Nadu, Andhra Pradesh and Chhattisgarh, they advocated the universal PDS system. They also suggested the use technology and financial innovation to strength the functioning of the PDS.

Based on the foregoing discussion, it can be inferred that various studies at the international level suggest that the direct cash transfer programme has been used as an effective tool to realize the twin objectives of achieving food security in the short run and to developing human resources (by improving the education and health) in the long run. The empirical evidence supports the fact that cash transfers are more effective in reducing hunger, malnutrition, wasting and stunting especially among children and improving the consumption expenditure, calories intake, diversified diet, education and health of the poor. Progresa/ oportunidades in Mexico, Bolsa Familia in Brazil, Familias en Acción in Colombia, and Red de Protection Social in Nicaragua have significantly contributed in achieving those objective through increased level of consumption and nutritional intake. The CCTs have been found to provide a more economical and efficient delivery mechanism. Literature indicates that if cash transfers are combined with other social assistance programmes (food, agriculture inputs), then they yield more beneficiaries’ satisfaction.

Further, it emerges from our literature survey that economists and policy makers differ in their opinions regarding the functioning of the PDS system in India: there are strong critics and ardent supporters at the same time. A detailed analysis of literature indicates that most of the studies are related to the functioning of the Public Distribution System in different states and reveal that corruption, high diversion of grains and wrong targeting are largely responsible for the existence inefficiencies in the current PDS system. At the same time, some other studies indicate that the PDS is performing well in states like Tamil Nadu, Kerala, and Chhattisgarh etc. Khera (2011) in her study classifies the state into three main categories: "functioning" states, "reforming" states and "languishing" states. First category includes the southern states, Maharashtra,
Himachal Pradesh and Jammu & Kashmir, where the PDS is performing satisfactorily. Second category includes Chhattisgarh, Madhya Pradesh, Orissa and Uttar Pradesh where the functioning of the PDS has improved over time and the third category comprises of Assam, Bihar, Jharkhand and West Bengal, where the function of the PDS is still poor.

The improving performance of TPDS over the time and the success of the CCTs in many developing and poor countries have lead to a policy debate among economist and policy makers in India. Some economists (Basu 2011, Parikh 2013) are of the opinion that in the view of serious limitations of the PDS functioning in India, there is a need of alternative policy to make food security more transparent, cost effective and liberal (more freedom of choice to the beneficiary). At the same time, some economists (Ghosh 2011, Svedberg 2012, Standing 2012) believe that cash transfer can act as a supplement to raise the basic income of the poor people but cannot be a perfect substitute of the PDS at least at this point of time.