

Macroeconomic Impact of Social Protection Programmes in India

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Generally, the fiscal implications of social protection programmes are evaluated, but not so much on the economic impacts these schemes have on macro aggregates such as output, employment, income and revenue. This motivated us to evaluate the economic impact of three major social protection programmes, namely, the Mahatma Gandhi National Rural Employment Guarantee Act, Indira Awaas Yojana, and the National Social Assistance Programme in 2011–12 using a social accounting matrix. It is found that these programmes have significant impacts on output across different sectors of the economy, on income generation and distribution of different household classes in urban and rural areas, on employment across different sectors of the economy, and even on government revenue generation.

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The gross domestic product of the Indian economy has approximately grown at an average of 7% in the last two decades. Despite having such a high average growth rate, almost 23.6% of people live at \$1.25 per day (in purchasing power parity or PPP terms) and 59.2% at \$2 per day (in PPP terms) as per an estimate for 2011 by the World Bank.¹ However, while poverty has declined in India in the last two decades it still remains high. The failure of the market to take care of the poor and weaker sections of the society makes it imperative for the government to intervene and initiate various welfare measures and social protection policies. It raises the need for support to the poor and the vulnerable through government schemes which are generally termed as social protection schemes.

“Social protection” has many definitions given by different agencies. In general, social protection is a “set of policies and programmes designed to reduce poverty and vulnerability by promoting efficient labour markets, diminishing people’s exposure to risks, and enhancing their capacity to protect themselves against hazards and interruption/loss of income” (ADB 2001: 1). Therefore, social protection focuses on reducing risks and vulnerabilities in a society by exogenous interventions in the market economy. Apart from government agencies, such interventions may also come from informal networks and public, private and voluntary organisations to prevent, manage and assist the poor in overcoming risks and vulnerabilities.

There is potential link between social protection and economic growth (Atkinson 1999; Arjona et al 2002; Barro 2008; Mathers and Slater 2014). However, such evidence in the literature is mainly available for developed countries. In a research synthesis on social protection and growth, Mathers and Slater (2014: 8) have observed that social protection has a potential impact at the micro level (that is, individual and household level), meso level (that is, local-economy level), and at the macro level (that is, national-economy level) through different channels. At the micro level, social protection may have an impact on growth through preventing the loss of productive capital, accumulating productive assets, and increasing access to labour markets, increasing innovation and risk-taking, and increasing investment in human capital. At the meso level, social protection may have an impact on growth through multiplier effects on the local economy, investment in public productive assets and infrastructure, and alterations to the functioning of the local labour markets. At the macro level, social protection may have an impact on growth directly by increasing household productivity and employment, increasing aggregate demand,

deepening capital markets, and taxation and borrowings. Further, it can do so indirectly by facilitating economic reforms, building human capital, contributing to social cohesion, and influencing demographics.

In recent years, social protection programmes have found a place in the agenda of many governments. These are designed in several forms such as labour-market interventions, social insurance, and social assistance. Social protection programmes have proved to be a powerful tool in the battle against poverty and inequality. The pension schemes in South Africa, Namibia, and Brazil have reduced the poverty gap and incidence of poverty. Child support grants in Brazil, Mexico and South Africa have reduced inequality and child poverty rates. Employment schemes in India and Pakistan have reduced the intensity of poverty and have helped women's empowerment.

Many studies have evaluated their impact and have shown that measures such as cash transfers and rural employment guarantee schemes have a positive impact on poverty reduction and on improving the living standards of people. Most of these studies, however, have been carried out in partial equilibrium frameworks and thus do not evaluate the important macroeconomic effects. As a result, they have a limited significance for policy analysis. We are not aware of any study in the Indian context that has analysed the impact of these programmes through a social accounting matrix (SAM) multiplier analysis. That has motivated us to evaluate the macroeconomic impact of a few social security programmes of the Government of India using SAM.

There is no specific framework of social protection schemes/provisions in India. Though there are some constitutional provisions and international conventions, which are ratified by the Government of India, the state governments or the state and central governments jointly provide some social protection provisions to the people. In the absence of a specific national framework, there are more than thousand, small and big, social protection schemes/provisions being implemented by the state governments, the central government, or by the state and central governments jointly. In the present study, only three major social protection programmes by the central government, namely, Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), Indira Awaas Yojana (IAY), and National Social Assistance Programme (NSAP),² have been considered because of non-availability of data on other programmes.

Therefore, the present endeavour aims to analyse the macroeconomic effects of social protection programmes, namely, MGNREGA, IAY and NSAP in SAM framework. The macroeconomic impacts have been measured in terms of output, income, employment, and revenue effects.

Methodology

A SAM is a matrix representation of the circular flow of income in an economy. It is a single-entry accounting system that represents all transactions and transfers between different sectors of production, factors of production, and institutions of the economy in a single matrix format. In the present study a 32 sector SAM of India for 2007–08 has been constructed with two factors of production (namely, labour and capital) and five

household categories for both rural and urban areas. The household categories are categorised in quintile classes based on monthly per capita expenditure for both rural and urban areas.³ The main data sources are an input–output (I–O) table for 2007–08, the 66th round of the consumer expenditure survey by the National Sample Survey Office, income–expenditure survey by the National Council of Applied Economic Research for 2004–05, and National Accounts Statistics by the Central Statistics Office. We have evaluated the impact of the expenditure incurred by the government on the three selected social protection programmes during 2011–12.

SAM Multiplier

Symbolically, a SAM may be represented as

$$X = Z + E \quad \dots (1)$$

where, X is total output, Z is endogenous demand and E is exogenous demand. Since, endogenous demand is proportionally related to total output,

$$Z = MX \quad \dots (2)$$

Therefore, equation (1) may be written as

$$X = MX + E \quad \dots (3)$$

where, M represents the coefficient matrix. The equation (2) may be rewritten as

$$X - MX = E$$

$$(I - M)X = E$$

$$X = (I - M)^{-1} E \quad \dots (4)$$

In equation (4), $(I - M)^{-1}$ represents the SAM multiplier. The size of the multiplier depends upon the number of accounts under the exogenous vector in the SAM. The lesser the number of accounts under the exogenous vector, the higher is the value of the SAM multiplier and vice versa. This also implies that the higher the number of accounts under the endogenous vector, the higher is the value of the SAM multiplier. In the present study, government, indirect taxes, capital account, and the rest of the world have been treated as the exogenous vectors.

Exogenous demand generates both direct and indirect effects. The direct impact pertains to those sectors from which the exogenous sectors demand directly. The indirect effects stem from the linkages of the directly affected sectors with the other sectors and other parts of the economy. These linkages may be divided into production and consumption linkages. The direct and indirect effects together measure the multiplier effect.

Measurement of SAM Multiplier Effect

In an economy, any change due to the exogenous sectors has an impact on the interlinked production sectors, factors and institutions. The impact may be direct, indirect or induced. The SAM multiplier effect measures the increment in the output vector X due to the change in the exogenous demand. The increment in the production account is termed as the output effect; and the increment in households and corporate accounts is termed as the income effect. Thus, the income effect comprises the households' income effect and the corporate income effect. The employment effect is obtained by multiplying the sector-wise output effect and the respective employment coefficients.

The total output effect may be disaggregated into direct and indirect output effects. The direct output effect is defined as an increase in the demand due to the direct expenditure pattern resulting from the expenditure on the schemes. The indirect output effect is defined as an increase in demand which is generated through linkages between different sectors. The direct output effect has been measured as expenditure incurred by households on different commodities, expenditure on construction materials, and government expenditure on different commodities as administration costs due to the direct income effect. The indirect output effect has been measured as the difference of the total output effect and the direct output effect. The direct, indirect and total employment effects have been measured as multiplications of the employment coefficient with the direct, indirect and total output effects, respectively.

The direct income effect has been measured as the amount determined by the government for spending as wages and transfer payment given to households. The indirect income effect has been measured as the difference of the total income effect and the direct income effect.

Distribution of Expenditure for 2011–12 in SAM

For a multiplier analysis, these expenditures have been distributed in the SAM framework. The details of the expenditure incurred on these programmes in 2011–12 are shown in Table 1. The expenditure on construction materials in MGNREGA has been distributed according to the technical coefficients of the materials used in the construction sector. Most of the studies pertaining to India claim that almost 30% of the people live below the poverty line (BPL). Since, only the people from the low income groups of rural areas find employment under MGNREGA, the expenditure on wages has been divided on the following assumption: the first quintile (RH1) is given 66.7% of the wage expenditure under MGNREGA while the second quintile (RH2) is allotted the remaining 33.3%. The expenditure on administration has been distributed according to the proportional expenditure incurred by the government on different sectors. The objective of the IAY is to construct houses for poor people. Therefore, the expenditure under this programme has been distributed according to the technical coefficients of the construction sector.

Table 1: Expenditure on MGNREGA, IAY and NSAP in 2011–12 (₹ crore)

Expenditure Items	MGNREGA	IAY	NSAP	Select SPPs Taken Together**
Construction/materials	11,065.16	12,926.33		23,991.49
Wage	24,860.91			24,860.91
Administration	21,08.63			2,108.63
Transfer payment			6,188.67	6,188.67
Total	38,034.70	12,926.33	6,188.67	57,149.70

* In the present study, three social protection programmes, namely MGNREGA, IAY and NSAP, have been considered. In order to understand the total impact of these three programmes, their expenditure, distributed in the SAM framework, has been added to form the expenditure pattern of the select SPP in the SAM framework.

As the aim of NSAP is to directly raise the income of the poor through transfer payment, the expenditure on it has been divided as the income of RH1 and RH2 on the same basis as has been adopted for wage distribution under MGNREGA, as described earlier. The distributed expenditure is added to obtain the total expenditure on the different sectors, factors and households

under the SAM framework. It creates a column vector of exogenous demand. The multiplication of this vector with the SAM multiplier gives the multiplier effect of expenditure on social protection programmes.

Findings and Analysis

Any expenditure through social protection programmes has multidimensional effects on the economy. The present paper attempts to study the total (both direct and indirect) output, income, employment and revenue effects of expenditure by the government in 2011–12 under three select social protection programmes, namely, MGNREGA, IAY and NSAP.

Output Effect: The initial expenditure incurred in 2011–12 through MGNREGA, IAY and NSAP together has raised the total output almost three (2.81) times. Considered individually, NSAP has induced the largest indirect output effects (Table 2). MGNREGA has followed closely the NSAP in indirect output effect generation. Table 2 clearly shows that the indirect output effects are much higher than the direct output effects of the government expenditure on these programmes. The higher value of the indirect output effects has resulted from the strong linkages of the sectors directly affected by these programmes with the other sectors and other parts of the economy.

Table 2: Output Effect of MGNREGA, IAY and NSAP in 2011–12 (₹ crore)

Social Protection Programmes	Direct Output Effect	Indirect Output Effect	Total Output Effect
MGNREGA	36,341 (0.96)	74,068 (1.95)	1,10,409 (2.90)
IAY	7,963 (0.62)	23,402 (1.81)	31,365 (2.43)
NSAP	5,935 (0.96)	12,623 (2.04)	18,558 (3.00)
Select "SPPs taken together"	50,239 (0.88)	1,10,093 (1.93)	1,60,332 (2.81)

The values in the parentheses show the ratio of the output effect with the total expenditure under the respective programmes.

Source: Author's calculation.

Income Effect: The total income effect due to expenditure on all the three "select SPPs taken together," is ₹1,01,003.63 crore (Table 3), which is 1.77 times of the total expenditure under all the three select SPPs. This clearly indicates that not only the total output but the total income is much higher than the initial government expenditure under these programmes. The total income effects due to expenditure incurred under MGNREGA, IAY and NSAP are 1.86 times, 1.25 times and 2.3 times higher than their respective expenditures. It is the highest under NSAP. This may be due to the fact that all the expenditure incurred directly under NSAP raises the incomes of the beneficiary classes. It suggests that if the government desires to increase the income of the poor, it

Table 3: Income Effect of Social Protection Programmes in 2011–12 (₹ crore)

	MGNREGA	IAY	NSAP	Select SPPs Taken
Households	65,805.79 (1.73)	14,694.75 (1.14)	1,3421.84 (2.17)	93,922.38 (1.64)
Private corporations	3,463.65 (0.09)	1025.66 (0.08)	605.03 (0.10)	5,094.34 (0.09)
Public enterprise	1,350.90 (0.04)	400.03 (0.03)	235.97 (0.04)	1,986.91 (0.03)
Total	70,620.35 (1.86)	16,120.44 (1.25)	14,262.84 (2.30)	1,01,003.63 (1.77)

The values in the parentheses show the ratio of the income effect with the total expenditure under the respective programmes.

Source: Authors' calculation.

may adopt the schemes which directly increase the income, for example, direct cash transfer schemes. However, it does not undermine the relevance of programmes like MGNREGA, which provide a kind of insurance to the unskilled labourer in rural areas, and IAY, which provides houses or assistance to construct houses to the poor. A small part of the income generated through these programmes reaches the corporate sector also. However, in general, the income effect for the households is the highest, almost more than 90% for all programmes, while the income effect for private corporations is higher than that for public enterprises.⁴

Select SPPs Taken Together: The total income effect of households due to the “select SPPs taken together” is 1.64 times of the initial expenditure incurred under these programmes (Table 3). The income effect for rural households is 71.45% of the total income effect for all households, which is more than twice the income effect for the urban households (Table 4). It may be due to the rural-centric nature of these programmes.⁵ The direct income effect has been observed only for the bottom classes of rural households, that is, RH1 and RH2 (66.67% and 33.33%, respectively; Table 4). This is due to the assumption that almost 30% of the rural households are BPL. The direct income effect for the first bottom class of rural households (that is, RH1) is almost nine times higher than their indirect income effect while for the second bottom class of rural households (that is, RH2), it is almost four times higher than their indirect income effect. The higher direct income effect for the first bottom class may be due to the large amount of transfer payment to it. The transfer payment directly increases the incomes of the beneficiary classes, which they spend according to their consumption

preferences. The households’ consumption expenditure further generates an indirect income effect through the multiplier process.⁶ Interestingly, the indirect income effect for the bottom class of the rural households is lower than that of their subsequent higher classes. The possible reason for this may be traced to the occupation pattern and the distribution of factor ownership among rural households. In general, people from higher sections of rural households are employed in better salaried occupations than people from the lower section. Further, the people from the higher sections of rural households own larger amounts of capital and land than the people from the lower sections. Accordingly, a larger share of the benefits accrues to the higher section of rural households. Similarly, a larger indirect income effect occurs through the income propagation process in favour of the higher classes of urban households as compared to the lower classes.

Surprisingly, the total income effect for the top rural and urban households classes (that is, RH5 and UH5) is very high in comparison to that for the subsequent lower classes except the bottom class of rural households (that is, RH1), which is the highest (24.55%) among all household categories followed by RH5 and UH5 (21.35% and 15.04%, respectively; Table 4). The high total income effect for RH1 is due to its high direct income effect. The possible reason for this lies in the large amount of government transfer payments to this rural household class as well as huge employment for this household class under MGNREGA. The high total income effect of RH5 and UH5 is due to the high indirect income effects for these classes generated due to the multiplier effect through consumption and production linkages. Therefore, it implies that despite having focus on the poor in rural areas, the

“select SPPs taken together” have a significant income effect for the rich in both rural and urban households.

MGNREGA: The total income effect of MGNREGA is the highest for RH1 and RH2 (27.49% and 15.34% respectively; Table 4). The direct income effect⁷ has been observed only for RH1 and RH2 simply because the two bottom rural classes are the poorest and the objective of the MGNREGA is to provide employment to these classes. Given this assumption, the direct income effect has also been observed for rural households only (₹24,860.91 crore; Table 4). In the case of the indirect income effect, rural households have recorded higher indirect income effect (57.81%; Table 4). Interestingly, similar to the indirect income effect due to the “select SPPs taken together,” the indirect income effect for the bottom classes of the rural and urban households is lower in comparison with the upper classes of households.

Table 4: Household Income Effect of MGNREGA, IAY and NSAP in 2011–12

Sector	MGNREGA			IAY			NSAP			SPPs Taken Together		
	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total
RH1	16,574 (66.67)	1,517 (3.70)	18,091 (27.49)	0 (0.00)	571 (3.89)	571 (3.89)	4,126 (66.67)	269 (3.72)	4,395 (32.74)	20,700 (66.67)	2,357 (3.75)	23,057 (24.55)
RH2	8,287 (33.33)	1,811 (4.42)	10,098 (15.34)	0 (0.00)	664 (4.52)	664 (4.52)	2,063 (33.33)	320 (4.43)	2,383 (17.76)	10,350 (33.33)	2,795 (4.45)	13,145 (14.00)
RH3	0 (0.00)	2,472 (6.04)	2,472 (3.76)	0 (0.00)	900 (6.12)	900 (6.12)	0 (0.00)	437 (6.04)	437 (3.26)	0 (0.00)	3,809 (6.06)	3,809 (4.06)
RH4	0 (0.00)	4,650 (11.36)	4,650 (7.07)	0 (0.00)	1,569 (10.68)	1,569 (10.68)	0 (0.00)	818 (11.31)	818 (6.10)	0 (0.00)	7,037 (11.19)	7,037 (7.49)
RH5	0 (0.00)	13,223 (32.29)	13,223 (20.09)	0 (0.00)	4,505 (30.66)	4,505 (30.66)	0 (0.00)	2,328 (32.19)	2,328 (17.35)	0 (0.00)	20,056 (31.90)	20,056 (21.35)
Rural	24,861 (100.0)	23,672 (57.81)	48,533 (73.75)	0 (0.00)	8,208 (55.86)	8,208 (55.86)	6,189 (100.0)	4,173 (57.69)	10,361 (77.20)	31,050 (100.0)	36,053 (57.34)	67,103 (71.45)
UH1	0 (0.00)	742 (1.81)	742 (1.13)	0 (0.00)	282 (1.92)	282 (1.92)	0 (0.00)	132 (1.82)	132 (0.98)	0 (0.00)	1,155 (1.84)	1,155 (1.23)
UH2	0 (0.00)	1,318 (3.22)	1,318 (2.00)	0 (0.00)	502 (3.42)	502 (3.42)	0 (0.00)	234 (3.23)	234 (1.74)	0 (0.00)	2,054 (3.27)	2,054 (2.19)
UH3	0 (0.00)	1,995 (3.22)	1,995 (2.00)	0 (0.00)	761 (3.42)	761 (3.42)	0 (0.00)	354 (3.23)	354 (1.74)	0 (0.00)	3,110 (3.27)	3,110 (2.19)
UH4	0 (0.00)	4,100 (10.01)	4,100 (6.23)	0 (0.00)	1,547 (10.53)	1,547 (10.53)	0 (0.00)	727 (10.05)	727 (5.41)	0 (0.00)	6,374 (10.14)	6,374 (6.79)
UH5	0 (0.00)	9,117 (22.27)	9,117 (13.85)	0 (0.00)	3,394 (23.10)	3,394 (23.10)	0 (0.00)	1,614 (22.32)	1,614 (12.03)	0 (0.00)	14,126 (22.47)	14,126 (15.04)
Urban	0 (0.00)	17,273 (42.19)	17,273 (26.25)	0 (0.00)	6,486 (44.14)	6,486 (44.14)	0 (0.00)	3,060 (42.31)	3,060 (22.80)	0 (0.00)	26,819 (42.66)	26,819 (28.55)
Total	24,861 (100.00)	40,945 (100.00)	65,806 (100.00)	0 (0.00)	14,695 (100.00)	14,695 (100.00)	6,189 (100.00)	7,233 (100.00)	13,422 (100.00)	31,050 (100.00)	62,873 (100.00)	93,922 (100.00)

Values in the parentheses show the percentages of the vertical total.

Source: Authors’ calculation.

The total income effect for the bottom class of rural households (that is, RH1) is the highest among all the household categories followed by RH5, the top class of rural households (27.49% and 20.09%, respectively; Table 4). The higher total income effect of RH5 is due to the very high indirect income effect for it. The top class of urban households (UH5) has seen a significantly high total income effect (13.85% of the total income effect). This is also due to its very high indirect income effect.⁸ The high indirect income effect for the higher classes of both rural and urban households has resulted in the high total income effect for the top class and the upper classes of rural and urban households. This brings out the fact that despite having a focus on the poor in rural areas, MGNREGA has had a significant income effect for not only the bottom classes in the rural households, but also for the rich rural and urban households.

Indira Awaas Yojana: There is no direct income effect of IAY (Table 4), as there is no policy of transfer payment or wages for a targeted section under this scheme. Therefore, in the case of IAY, the total income effect constitutes only in indirect income effect. The highest income effect has been recorded for rural households (55.86%; Table 4). Interestingly, as in the case under the “select SPPs taken together” and MGNREGA, the indirect income effect, which is also the total income effect, is lower for the bottom classes of the rural and urban households than that for their counterparts among the upper classes. This shows that despite the programme target being the poor in rural areas only, the IAY has a significantly high income effect for the upper classes in both rural and urban households.

National Social Assistance Programme: The main objective of NSAP is to reduce poverty and enhance the purchasing power of weaker sections of the society. Similar to the direct income effect of MGNREGA, the direct income effect of NSAP has been observed only for the bottom classes of the rural households, that is, RH1 and RH2 (66.67% and 33.33%, respectively; Table 4). As regards the indirect income effect, it is worked out at 57.69% (Table 4) for the rural households, which is similar to the indirect effect observed under MGNREGA. Interestingly, as in the case under MGNREGA and IAY, the indirect income effect of NSAP is lower with respect to the bottom classes of the rural and urban households than that with respect to the higher classes.

The total income effect for the bottom class of rural households (that is, RH1) is the highest among all the household categories, followed by RH2 and RH5 (32.74%, 17.76% and 17.35%, respectively; Table 4). The higher total income effect of RH1 and RH2 is due to the high direct income effect for these households, which is a consequence of the transfer payment from the government to these households. The high total income effect for RH5 is due to the high indirect income effect for it, which is a consequence of linkages in the economy and returns to the productive assets owned by this group of households. This could be due to the generation of factor incomes resulting from the initial consumption of the beneficiaries of NSAP. Although the higher income classes are not direct beneficiaries, they enjoy a high indirect income effect as a result of their participation in

the business activities that have strong production and consumption linkages with different sectors of the economy. It emerges, therefore, that the NSAP targets only the poor in rural areas, but the programme has a significantly high income effect for the upper classes in both rural and urban households.

Employment Effect

Social protection programmes have an impact not only on the sectoral output but also on the sectoral employment. Producers employ labour to produce more output to meet the increased demand generated by the social protection programmes. Thus, these programmes create employment opportunities. The employment

Table 5: Employment Effect MGNREGA, IAY and NSAP in 2011–2012 (in thousands)

Social Protection Programmes	Employment Effect		
	Direct	Indirect	Total
MGNREGA	2,475 (37.64)	4,100 (62.36)	6,575 (100.00)
IAY	143 (11.86)	1,062 (88.14)	1,205 (100.00)
NSAP	556 (41.42)	787 (58.58)	1,343 (100.00)
Select SPPs taken together	3,174 (34.79)	5,949 (65.21)	9,123 (100.00)

In parenthesis, the values show percentage of the horizontal total.

Source: Authors' calculation.

effects due to expenditure through MGNREGA, IAY, NSAP, and “select SPPs taken together” are (all in thousands) 6,575, 1,205, 1,343, and 9,123, respectively (Table 5). The indirect employment effects for all these three programmes are very high. This indicates that greater employment has been generated due to induced demand, which is the result of linkages in the economy.

Revenue Effect

The above sections clearly indicate that social protection programmes have significant output and income effects. From the output produced due to these programmes, the government will get revenue such as excise duty and sales tax. The richer section of society also receives an additional income due to these programmes in terms of indirect income effect which yields government revenue resulting from income tax on the incremental income due to these programmes. Therefore, the social

Table 6: Revenue Effects of MGNREGA, IAY and NSAP in 2011–12 (₹ crore)

Social Protection Programmes	Direct Taxes	Indirect Taxes	Total Revenue
	MNREGA	4,378.66 (0.12)	2,479.03 (0.07)
IAY	1,411.13 (0.11)	1,150.54 (0.09)	2,561.66 (0.20)
NSP	768.47 (0.12)	252.34 (0.04)	1,020.81 (0.16)
Select SPPs taken together	6,558.25 (0.11)	3,881.90 (0.07)	10,440.16 (0.18)

In parenthesis, the values show ratio with initial expenditure under respective programme.

Source: Authors' calculation.

protection programmes may have an impact on government revenue through direct and indirect taxes on the induced incomes of households, corporate sectors, and public enterprises arising directly and/or indirectly from these programmes. Table 6 clearly indicates that the revenue generated by the expenditure under MGNREGA, IAY and NSAP is 0.18 times, 0.20 times and 0.16 times of the initial expenditure under these programmes. The revenue effect of the three selected programmes through the multiplier process is ₹10,440.16 crore, which is almost one-fifth of the initial expenditure. It means that the net cost of the implementation of these programmes is almost 80% of the initial expenditure, that is, 20% of initial expenditure is recovered by the government in the

form of revenue from different taxes. Clearly, the revenue generated is less than the expenditure under these programmes, but the fact remains that these do generate some revenue, apart from output, income and employment effects.

In general, the direct taxes due to these programmes are higher than that of the indirect taxes (Table 6). It indicates that given the structure of the economy, the income generation through them has significant impact on the income of the rich households.

Conclusions

The social protection programmes are designed to meet some specific objectives and while achieving them, these programmes benefit the whole society. The expenditure under any social programme has micro (that is, individual/household-level), meso (that is, community-level) and macro (that is, aggregate effect at national level) effects.

The present study is an attempt to capture the economic impacts of SPPs. It is understood that since the objectives of the different social protection programmes and the expenditure thereon are different, there would inevitably be variations in their economic impact. For non-availability of the required data on all the social protection programmes in India, the present study has selected only three social protection programmes, namely, MGNREGA, IAY and NSAP, for

evaluating their economic impact in terms of output, income, employment and government revenue as an illustrative exercise.

As regards the output effects of all the three programmes, the study finds that these programmes have significant output effects. The indirect output effects are higher than the direct output effects due to linkages with the other sectors and parts of the economy. Moreover, these programmes have generated employment for thousands of people, both directly and indirectly.

The income effect of these programmes is found to be almost twice the expenditure. The income effect of the households is higher than the income effect for private corporations and public enterprises. In general, a higher income effect is reflected in the bottom classes of rural households, the target being rural households. However, what is noteworthy is that even though the focus is on the poor in rural areas only, the government expenditure under these programmes has induced a significantly high income effect for the upper classes in both the rural and urban households. This has happened through the linkages in the income propagation process.

What is interesting is that apart from the output, income and employment effects, these programmes also generate significant government revenue through taxation of the induced income and consumption.

NOTES

- 1 "Poverty & Equity," The World Bank, viewed on 20 September 2015, <http://povertydata.worldbank.org/poverty/region/SAS>.
- 2 For a brief description of these programmes, see Appendix A.
- 3 For a detailed discussion of the method, see SARNET Working paper by Akhilesh K Sharma, M R Saluja and Atul Sarma (2015).
- 4 The incomes of the households comprises factor payment, transfer payment, and remittances from abroad. The incomes of private corporations and public enterprises are the undistributed profits.
- 5 The main focus of these programmes is poverty reduction and the prevalence of poverty in the rural areas is higher than that in the urban areas.
- 6 The increased income of households due to transfer payment induces consumption demand. The economy meets this increased demand for consumption through the expansion of production activities, which employ factors of production and their owners receive the payment in return as factor's income. Thus, the indirect income effect is the factor's income received by households due to the expansion of economic activities, which takes place to meet the increased demand of commodities and services due to the direct income effect during the first and subsequent rounds of the multiplier effect through consumption and production linkages.
- 7 The direct impact is because the labour employed belongs to the lowest two categories. The vectors of expenditure are obtained by assuming the current pattern of expenditure of their two categories. The indirect effect is increasing over quintiles and is the maximum for the richest categories of rural as well as urban areas. This is because people of the lowest class will spend money on purchasing items from the primary sectors, clothing, educational and medical services, among other things. These sectors will require inputs (including factor inputs) from other sectors and so on, which will provide incomes

to the rich people. The indirect effect in the case of MGNREGA is inclusive of the effect of the expenditure on materials incurred under the scheme (construction materials) and that of administrative expenditure.

- 8 The possible explanation for this has been mentioned in the section under the sub-head, "Income Effect of 'Select SPPs Taken Together'."

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Appendix A: Description of Selected Social Protection Programmes

Mahatma Gandhi National Rural Employment Guarantee Act: The MGNREGA, run by the Government of India, is the world's largest welfare programme. It is a job guarantee scheme for rural Indians, and was enacted by legislation

on 25 August 2005. It aims at enhancing the livelihood security of people in rural areas by guaranteeing 100 days of wage employment in a financial year to a rural household whose adult members volunteer to do unskilled manual work.

Indira Awaas Yojana: This is a social welfare programme, launched by the Indian government in 1985, to provide housing for the rural poor in India. It is one of the major flagship programmes of the Ministry of Rural Development and aims to construct houses for the below the poverty line population in the villages. Under the scheme, financial assistance worth ₹35,000 in the plain areas and ₹38,500 in the difficult hilly terrains (highland areas) is provided for the construction of houses. The houses are allotted in the name of the woman in the family or jointly between the husband and wife. The construction of the houses is the sole responsibility of the beneficiary and engagement of contractors is strictly prohibited.

National Social Assistance Programme: The National Social Assistance Scheme or National Social Assistance Programme is a flagship welfare programme of the Government of India, which was initiated on 15 August 1995. Article 41 of the Indian Constitution directs the state to provide public assistance to its citizens in case of unemployment, old age, sickness and disablement, and in other cases of undeserved want within the limit of its economic capacity and development. The scheme signifies a "giant step" towards achieving the directive principles in the Constitution. The scheme is administered by the Ministry of Rural Development, Government of India, and its beneficiaries could hail from either urban or rural areas.