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Political Economy of Government Expenditure: A Case of Power Subsidy in India

Atsushi Fukumi

1. Introduction

The introduction of New Economic Policy in India has promoted various economic reform policies such as the reduction of tariffs, easing of capital restrictions, and privatisation, all of which increased the average annual growth rate from 2003 to 2007 by 8.8%. As an emerging international market, India's serious lack of infrastructure, particularly the power sector, had to be improved. The sector has been beset by frequent power cuts, power shortages, and low electrification ratio in rural areas. Developing power with a generation capacity of 200,000 MWh, which is 1.6 times higher than the current capacity, has been targeted for the eleventh 5-year plan in order for the country to achieve an annual GDP growth rate of 9%. However, there is little room for optimism that this goal will be achieved since only 76.1% of the target level for power generation had been accomplished during the tenth 5-year plan (Planning Commission, 2008).

The underdevelopment of the power sector is closely related to the "soft budget" it received during the era of mixed economy. After independence in 1947, the State Electricity Boards (SEBs), which are dominantly responsible for power generation, transmission, and distribution in India, were established. The SEBs have been operating for a long time without regard to commercial concerns because they could receive ex-post financial transfer from the central and state governments. Because of mismanagement, most SEBs fell into de facto financial collapse in the 1980s, which made it difficult to invest in the establishment, operation, and maintenance of their facilities. It is often discussed that politicians and political parties have used the SEBs as a channel for distributing rent to their support base, hence compromising the SEB's financial status. A typical case is the power tariff collected by politicians from agricultural users which is far lower than the accepted cost just to win farmers' votes. These implicit subsidies¹ for farmers, reaching up to 200 billion Rs, are eroding the financial status of SEBs and the state governments.

Such populism in India is often said to have resulted from the breakup and downfall of the Indian National Congress in 1967 because of the overwhelming force of the majority. According to Dubash and Rajan (2001), power subsidies increased and the SEBs' financial status deteriorated under the unstable political situation in the 1970s because of the escalating populist behaviour of politicians who wanted to strengthen their power base.

Based on previous studies, in this paper we empirically investigate the effect of political

¹ In general, subsidy is divided into two categories: "explicit subsidy" which is directly provided to the consumer or producer, and "implicit subsidy" which is provided indirectly through price control by the government (Schwartz and Clements, 1999). Power subsidy in India can be categorised under the latter.

instability on power subsidies and attempt to understand how to the Indian power sector came to be in such a serious condition. While the effect of political and social factors on fiscal policies and provision of public goods have been studied by Besley and Burgess (2002), Pande (2003), Khemani (2004), Chaudhuri and Dasgupta (2006), and Banergee and Somanathan (2007), none of these sufficiently dealt with the power sector. Thus, here we focus on power subsidies which are very relevant to the current serious condition of India's power infrastructure.

The outline of this paper is as follows. In section 2, we briefly explore the basic issues concerning the power sector in India. In section 3, we empirically assess the impact of political instability on power subsidies using panel data from the 14 major Indian states. Section 5 concludes the paper.

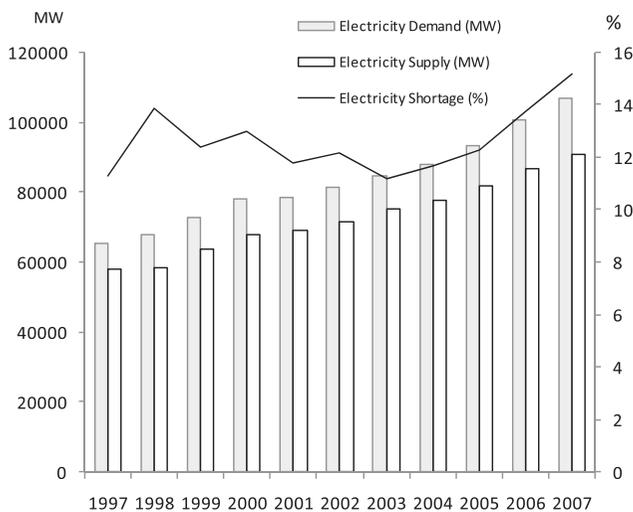
2. Power Subsidy and Politics in India

2.1. Issues in the Indian Electricity Sector²

The main players in India's power sector are the SEBs, which were established under the Electricity Supply Act enforced in 1948. The SEBs are under the control of state governments and are highly dependent on grants and loans from the latter. Other players in the power sector are the National Thermal Power Corporation (NTPC) and the National Hydroelectric Power Corporation (NHPC) owned by the central government. Despite the reforms after 1991 which allowed a few private companies entry to the sector, the SEBs continue to dominate, controlling a 60% share of the power supply.

Although the SEBs have contributed to the industrialization of India, the power sector has been beset with serious problems.

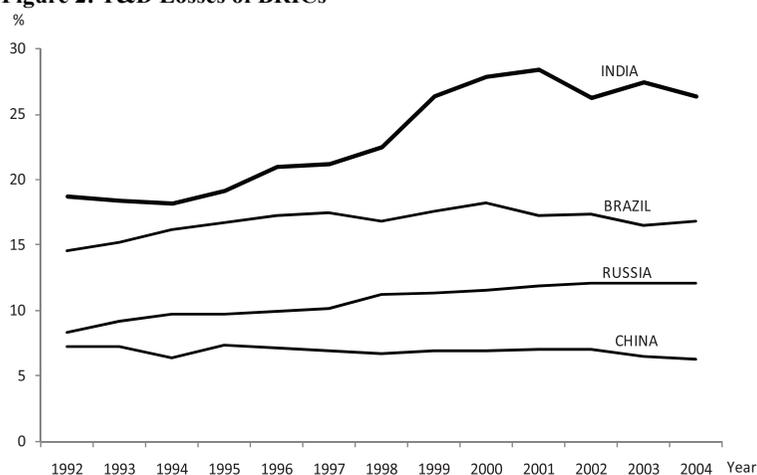
Figure 1: Electricity Demand and Supply (Peak Period)



Source: Ministry of Power, Annual Report 2007-2008

First is the power shortage in the 1980s that limited or cut power supply. Figure 1 shows that the gap in demand and supply of power has been closing from the late 1990s to 2003, but that it increased in recent years to 15.2% in 2007. In addition, the low quality of electricity with unstable voltage and frequency can damage electric devices. Since power cuts and breakdown of electricity devices can prove fatal for hospitals and industrial firms, they must invest in generators and stabilisers. Power with poor quality

² This sub-section is mainly based on the Planning Commission (2002) report and on Tongia (2007).

Figure 2: T&D Losses of BRICs

Source: World Development Indicator

commercial (AT&C) losses are quite serious in India³. Figure 2 shows the ratio of T&D losses in India, Brazil, Russia, and China. T&D losses in India rose to 26.9% in 2004, which is remarkably high compared to other countries⁴. While technical factors caused by inadequate investment on transmission and distribution facilities naturally can increase the losses, the more vital factors are the losses from pilferage and nonpayment.

This problem is serious particularly in rural areas and has been exacerbated by (a) insufficient setting and maintenance of meters, (b) difficulty in figuring out the number and capacity of electric irrigation pumps used by SEBs as the criterion to set a flat rate tariff, (c) delay of connecting to the power network through formal procedures⁵, and (d) the spread of corruption among SEB employees who allow pilferage and nonpayment in exchange for commissions.

Closely related to all of the abovementioned problems is the serious financial status of the SEBs. Table 1 shows that they incurred huge commercial losses up to 169.5 billion Rs in 2007, and 60% of such losses were compensated by the state government. Subvention to SEBs accounted for 13% of the gross fiscal deficit of states in 2007 and imposed a heavy burden on state finances.

The SEBs' finances have been adversely affected not only by power losses but also by the distribution of power subsidies through an irrational tariff structure. The tariffs for agricultural and domestic consumers are set far below the actual cost. Table 1 shows that the power subsidy for agricultural consumers, reaching around 200 billion Rs after 1997, accounts for 70% of the total subsidy. While agricultural consumers enjoy the preferential tariff, tariffs for industrial and commercial consumers are set above the cost and the surplus is used as cross-subsidy to

³ T&D losses include losses in transmission and distribution process due to technological factors as well as pilferage. AT&C losses are defined to include non-billing, incorrect billing and inefficiency in collection in addition to T&D losses.

⁴ According to the World Bank (2007), India's T&D losses ratio in 2004 was ranked 12th worst in the world.

⁵ Katiyar (2005) investigates the background of pilferage and reports a household which has been waiting for more than 15 years after formally applying for power network connection.

can also damage transmitters and electric irrigation pumps, which has adversely affected farmers in Haryana and Andra Pradesh (World Bank, 2001). And some medium and small companies suffer because they cannot afford such investment.

Moreover, transmission and distribution (T&D) and aggregate technical and

Table 1: Financial Status of the SEBs (Rs. Crore)

	1992-1993	1997-1998	2002-2003	2007-2008
Power subsidy from SEBs to	15887	27511	27632	28451
Agricultural consumers	12243	21424	19747	19326
Domestic consumers	3261	5798	7714	8778
Inter-state sales	384	290	171	347
Commercial losses (Excluding subventions from State Governments)	7405	13260	19328	16953
Subventions from state governments	3247	8095	11748	9340
Gross fiscal deficit of state governments	35498	48787	90148	71451
Share of subventions in gross fiscal deficit of states	9.1%	16.6%	13.0%	13.1%

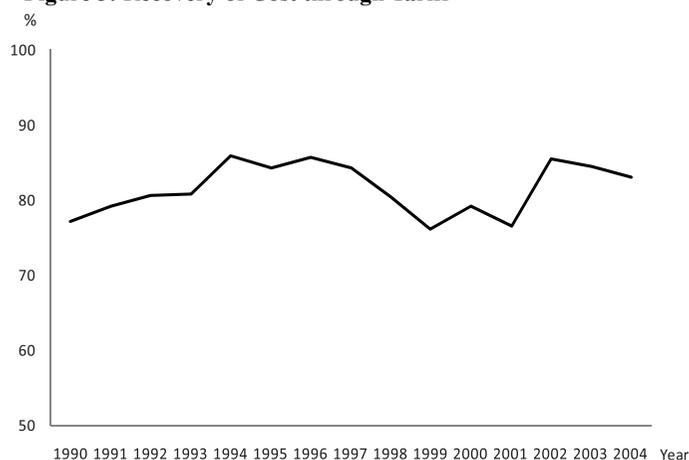
Source: Ministry of Finance, Economic Survey (various years); Reserve Bank of India, Handbook of Statistics on Indian Economy 2007

Note: (a) GDP deflator is used to adjust for inflation (Base year: 1999-2001).

(b) Power subsidy is defined as average cost minus average tariff times the number of units sold to a given sector.

compensate deficit. The distorted tariff structure promotes private power generation, which reduces tariff revenue, setting off a vicious cycle. From Figure 3 which presents the recovery ratio of cost through tariff over the past 15 years, we can see that only 80% of the actual cost is recovered by tariff revenues. The irrational tariff structure leads to low recovery of cost, which adversely affects the SEBs' financial status.

Most of the measures implemented to improve the situation have been ineffective. Tongia (2007) summarises the process of power sector reform after the New Economic Policy was implemented into the following three stages. The first stage in the early 90s was the period of deregulation, which allowed private companies to enter the power generation business and

Figure 3: Recovery of Cost through Tariff

Source: Central Electricity Authority, Annual Report 2005-2006, P.73

promoted the establishment of the Independent Power Producers (IPPs). Although foreign capital could be attracted, the IPPs generated only a fraction of the power required. The second stage involved the breakup of the SEBs into generation, transmission, and distribution companies. Orissa was the first state to implement this breakup in 1996 and other states like Haryana, Andra Pradesh, and Rajasthan followed to varying

extends up until the end of the 1990s. Another important reform in this period concerned the establishment of Electricity Regulatory Commissions (ERCs), which hold responsibility for setting tariffs in order to rationalise the tariff structure. The third stage, from the late 1990s until the present, saw the central government start to take the initiative in providing a general environment for reform. In order to reduce commercial losses, the central government started the Accelerated Power Development and Reform Program (APDRP) in 2003. The program provides funds to state governments to improve their power infrastructure (including meter installation) while motivating state governments with extra financial assistance to implement reform.

The Electricity Act, enforced since June 2003, provides the legal framework for reforming the power sector, and we are at present awaiting the outcome. However, as Bhattacharyya (2007) points out, finding major progress is difficult, especially in the rationalisation of the tariff structure and in the prevention of pilferage. Tongia (2007) holds that the effectiveness of reform depends on the degree of political commitment, while the effectiveness of the ERCs hinges on the institutions on which they depend for their authority. Also, we should note that serious opposition from farmers, the biggest beneficiaries of electricity subsidies, is the major impeding factor in the reform. Since it is politically difficult to eliminate vested interests, external pressure from international organisations such as the World Bank may facilitate reform.

2.2. The Determinants of Power Subsidy

Populism in Indian politics has spread with the formation of various political parties after the breakup of the Congress Party in 1967 and the diminishing of its dominant position. While political instability increased in states and federal politics, politicians and political parties tended to engage in political patronage in order to strengthen their electoral power base. Of primary importance was to win the vote of farmers, and power subsidies have been used as one of the most effective political tools for this purpose.

According to Dubash and Rajan (2001), the first case of using power subsidy as patronage can be found in the election manifesto of the Congress Party during the Andhra Pradesh state assembly election in 1977, which committed itself to the adoption of a flat-rate tariff. This was followed by other states, such as in the case of the free electricity supply initiated by AIADMK in Tamil Nadu. In addition, the green revolution of the 1960s to the 1970s expanded power subsidies. Since large quantities of water are needed to attain high rice yields, irrigation facilities were developed extensively. The main power source of irrigation pumps shifted from diesel to electricity, which directly linked farmers' interest with the power tariff. Further, while improved agricultural productivity enhanced the political power of the middle and rich classes of farmers, the number of legislative officers with agricultural backgrounds also increased dramatically. After this period, the management of SEBs became highly politicised and power subsidies became widely used to win farmers' votes. Such a situation went in tandem with the increasing instability of politics and the empowerment of farmers.

Generally speaking, various subsidies might be justified on grounds of (a) their positive externality, (b) infant industry protection, and (c) poverty and redistribution program (Schwartz

and Clements 1999). Power subsidies in India have been distributed as a part of poverty reduction efforts, however, the biggest beneficiaries of power subsidies are said to have been relatively rich farmers, not the poor farmers. Howes and Murgai (2003) reported that 80% of the poor in Karnataka cultivate non-irrigated lands and are unlikely to enjoy free or cheap electricity. Jain (2006) reported a similar case in Punjab. The World Bank (2001) found that most poor farmers in Haryana would agree to a rise in power tariff along with improvement in the quality of power. Therefore, it is doubtful that power subsidies have had a specific effect on poverty reduction.

On the other hand, power subsidies are criticised because of their economic and social losses (Roy and Tisdell 1998, Srivastava and Rao 2004). Power subsidies not only exert negative effects where the industrial and commercial sectors are charged over-valued tariffs, but also damage the environment due to wasteful consumption. Above all, a large amount of power subsidies can crowd out public investment while causing deterioration of state and central government finances. In other words, we can say that power subsidies not only retard the accumulation of public goods such as electricity facilities, but also result in a low growth rate. Political instability is a crucial factor in such a situation.

Regarding the effect of political instability on expenditure policy and growth, Goyal (2003) indicated that the first reaction of new parties to the acquisition of power is likely to result in the adoption of an expenditure policy characterised by populism for their support groups. Pai (2002) also suggested that, in Uttar Pradesh, parties based on caste, religion, and regional groups have not been able to aggregate public opinion, which in turn has led to political instability, lack of incentive for development, and low development expenditure. Thus in the same context, regarding power subsidies focused on here, we can pointed out that they might hamper the accumulation of public good including power infrastructure, which in turn retard long run economic growth. In addition, political instability can be a crucial factor bringing about the situation. Based on the discussions in preceding sections, we assess the impact of political instability on power subsidy in the next section.

3. Empirical Analysis

3.1. Framework

The data we use here is the panel data from 14 Indian states⁶ obtained over 10 years from 1992 to 2001. Recent studies investigating the impact of social and political factors on government expenditure include Besley and Burgess (2002) who assessed the effect of mass media on public food distribution and calamity relief expenditure in case of facing exogenous shock, and Khemani (2004) and Chaudhuri and Dasgupta (2006) who analyzed the cycle of state assembly election on government consumption and public investment. However, these studies did not pay sufficient

⁶ The states are Andhra Pradesh, Bihar, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, and West Bengal. The data period starts from 1992 since the economic reform starts in effect and ends in 2001. Also, the Planning Commission stopped publishing its annual report which provided the only source of power subsidy data comparable in a time series.

Table 2: The List of Variables

Variables	Definition	Data source
SUBSIDY	Agricultural power subsidy per cultivator (Rs 100)	Planning Commission (2001),(2002)
FRA	Index of political instability (Fractionalization index)	Election commission of India (http://www.eci.gov.in/database)
POL	Index of political instability (Polarization index)	
ELE	Election year dummy	
REFORM	Power sector reform dummy	Author's construction based on World Bank (http://web.worldbank.org/)
NEWS	Circulation of newspapers per literacy population (Aged 20 years or older)	Census of India (Data of literacy population for 1991,2001), Press in India (Various issues)
POP	The natural logarithm of cultivator population	Census of India (Data for 1991, 2001)
PUMP	Number of well and tube well with electric pump per cultivator	Agricultural Census (Data of pumps for 1990, 1995, 2000), Census of India (Data of cultivator population for 1991,2001)
POVERTY	The ratio of people under poverty line to total population	Planning Commission (1988, 1993, 2000)

Note: (a) To deflate nominal value of power subsidy, Consumer Price Index Numbers for Agricultural Labourers is used.

(b) Missing data in explanatory variables are filled in based on the ratio of change.

(c) ELE doesn't equal to 1 in the year of election before termination of term.

(d) Cultivator include main and marginal cultivator.

(e) See footnote 11 for details of REFORM.

attention to the power sector and thus, we now focus on power subsidy which is closely related to the current serious situation of the power sector. The regression model we use here is as follows⁷.

$$SUBSIDY_{it} = c + \alpha POL_{it} + \beta ELE_{it} + \gamma NEWS_{it} + \delta REFORM_{it} + \epsilon PUMP_{it} + \epsilon POP_{it} + \theta POVERTY_{it} + \mu TIME_{it} + u_{it}$$

For the dependent variable, we employ the amount of power subsidy for agricultural consumers per cultivator (SUBSIDY). This variable is calculated by dividing the “power subsidy for agricultural consumers” obtained from the Planning Commission (2002) by the population of cultivators and adjusted by the Consumer Price Index numbers for agricultural laborers. Note that Dixit and Sant (1997) point out that SEBs may record losses from pilferage and nonpayment as agricultural power consumption in order to disguise their performance. While illegal use of power is particularly serious in rural areas, tacit acceptance of such practice can be interpreted as a kind of subsidizing. Thus, we also include this form of subsidy in the data of agricultural power subsidy.

For measures of political instability, we constructed several indexes based on the number of votes obtained by each candidate in state assembly elections. We calculate these indexes in each constituency, and then take the weighted average of these in order to create state-level indexes.

⁷ See Table 2 for the definition of variables.

The first we apply is the political polarization index (POL), a new proxy of instability proposed in recent studies (Montalvo and Reynal-Querol, 2005), which assumes that conflict is more severe if people's political preference is more polarised. This is calculated by:

$$POL = 1 - \sum_{i=1}^M \left(\frac{0.5 - n_i/N}{0.5} \right)^2 \cdot \left(\frac{n_i}{N} \right)$$

where N is the total number of votes in the state assembly election, n_i is the number of votes obtained by a candidate i ($i = 1 \dots M$). The POL index reaches a maximum if the total number of votes is shared equally by only two candidates in each constituency. The second we apply is the political fractionalization index (FRA), under the longstanding assumption that the potential for political conflict grows with more fragmented preference of people. Based on the results of the state assembly election, this index is calculated by:

$$FRA = 1 - \sum_{i=1}^M \left(\frac{n_i}{N} \right)^2$$

This index increases with an increase in the number of candidates who obtained equal votes in the state assembly election. Faced with the theoretical difficulty of anticipating which index can capture potential political instability more precisely (Alesina et al., 2003), we decided to use both⁸.

As other political variables, we employ the election dummy (ELE) which equals 1 in the election years and 0 in other years. However, in order to consider the reverse causality that subsidy policy triggers a snap election, we do not treat the year of election before the termination of term as the election year, following Khemani (2004) and Chaudhuri and Dasgupta (2006). It is expected that ELE will have a positive effect on the basis of the assumption that populist fiscal expenditure can be expanded in election years.

Also, we employ the circulation of newspapers per capita (NEWS) as the explanatory variable in order to capture the effect of mass media development. Although based on the discussion of Besley and Burgess (2002) we assume that the development of mass media is positively related to the government's responsiveness to civil interests, it is difficult to expect the sign of this variable in this study since newspaper subscribers include not only farmers who need agricultural power subsidy but also other citizens who do not. Thus, we judge the effect of NEWS from the regression results.

We employ the reform dummy (REFORM) in order to capture the impact of power sector reform. Generally, both unbundling of SEBs and establishment of electricity regulatory commissions (ERCs) are thought of as the most important features of power sector reform. Our reform dummy equals 1 only if these two reforms were carried out with loans from the World Bank, in order to exclude the case of token reform⁹. REFORM will have negative impact if the reforms were effective.

⁸ See Alesina et al. (2003) for more details.

⁹ The reform dummy equals 1 in Andhra Pradesh (1999-), Haryana (1998-), Karnataka(1999-), Orissa (1996-), Rajasthan (2000-), Uttar Pradesh (2000-).

The number of electronic pumps per cultivator (PUMP) is a variable on the assumption that power subsidy is requested more in those states where electronic pumps are widely used. Since power subsidies can contribute to expand the use of electronic pumps and there might exist reverse causality, we employ the one-year lag value of PUMP. The logarithm of cultivator population (POP) is a variable on the assumption that the demonstration effect would be stronger with the number of stake holders in power subsidy. It is expected to have a positive sign. The poverty ratio (POVERTY) aims to capture the impact of economic development and to have positive sign if power subsidy has a feature of poverty reduction policy. TIME is the time trend.

3.2. Regression Results

Table 3 demonstrates the regression results. Only the results of the fixed effect model are presented since the results of the F-test and Hausman test indicate that the fixed effect model is more appropriate. In regression (1) we assess the impact of all variables without controlling political instability indexes. With the exception that ELE has no significant effect with the opposite sign, all the variables have significant effect with the expected sign; that is, NEWS has a positive and significant effect at the 10% level of significance, REFORM has a negative and significant effect at 5%, and each of PUMP, POP, POVERTY and TIME has a positive and significant effect at 1%.

In regressions (2) and (3), we assess the impact of the political instability indexes POL and FRA. Regression (2) shows that POL has a positive and significant effect at the 10% level of significance, which is consistent with our discussion. In regression (3), FRA has no significant effect with a negative sign. The results for other variables in both specifications are almost the same as those in regression (1). In regressions (4) and (5), we exclude ELE which has no significant effect in regressions (2) and (3) from the explanatory variables. Again, we can see essentially the same results. These regression results can be summarised as follows.

First, since POL has a positive and significant effect, we propose that political instability in the sense of polarization in political preference can lead to the expansion of power subsidy for agricultural consumers. Our result therefore supports our hypothesis regarding the relationship between political instability and power subsidies. On the other hand, there is no systematic relationship between FRA and power subsidy, suggesting that polarization, not the fractionalization of political preference, tends to lead to political patronage.

Second, ELE has no significant effect, while its negative sign is contrary to our expectation. Since the impact of the election cycle is emphasized by some previous studies (e.g., Khemani 2004), we also assessed the impact of other election dummies,¹⁰ but none of these showed significant effect. This suggests that the election cycle itself has no impact on power subsidy. However, considering that state assembly elections were implemented at most only two times during the period, careful analysis will be needed to derive the conclusion about the impact of election cycle on power subsidy.

¹⁰ We also constructed the dummy variables which (a) equals to 1 in years of all elections including snap election, (b) equals to 1 in one previous years and years of all elections.

Table 3: Determinants of Agricultural Power Subsidy

	Dependent variable: SUBSIDY				
	(1)	(2)	(3)	(4)	(5)
POL		13.206 (0.088)		13.204 (0.087)	
FRA			-6.848 (0.448)		-6.879 (0.442)
ELE	-0.059 (0.913)	-0.061 (0.910)	-0.021 (0.970)		
NEWS	4.514 (0.066)	4.038 (0.099)	4.256 (0.086)	4.064 (0.094)	4.264 (0.083)
REFORM	-1.546 (0.048)	-1.624 (0.036)	-1.508 (0.054)	-1.625 (0.036)	-1.508 (0.053)
PUMP	10.519 (0.000)	10.639 (0.000)	10.385 (0.000)	10.633 (0.000)	10.382 (0.000)
POP	27.977 (0.000)	27.061 (0.000)	27.127 (0.000)	27.102 (0.000)	27.137 (0.000)
POVERTY	0.617 (0.000)	0.584 (0.000)	0.615 (0.000)	0.586 (0.000)	0.616 (0.000)
TREND	1.841 (0.000)	1.752 (0.000)	1.835 (0.000)	1.755 (0.000)	1.836 (0.000)
R-square (Within)	0.626	0.635	0.627	0.635	0.627
F-test	47.73	43.57	45.91	43.94	46.31
P-value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Hausman test	65.5	47.1	58.2	50.8	61.0
P-value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Number of States	14	14	14	14	14
Number of Observation	138	138	138	138	138

Note: P-value is in parenthesis.

Third, regarding the impact of NEWS, the regression results show a positive impact. Based on Besley and Burgess (2002), we can say that (a) most voters seem to prefer the expansion of power subsidy for agricultural consumers, and (b) the development of mass media seems to promote the responsiveness of state governments to the request of the people.

Fourth, since REFORM has negative and significant effects in all regression results, it is implied that reforming the power sector with financial assistance from the World Bank has a certain impact to reducing power subsidy. However, it is possible that power sector reform has forced the SEBs to report pilferage and nonpayment not as agricultural power consumption but honestly as commercial loss. This, in turn, decreases the face value of power subsidy for agricultural consumers per cultivator.

To consider this possibility, we employ the T&D losses as the dependent variable and regress it to REFORM¹¹. Regression results in Table 4 show that REFORM has a positive and significant effect on the ratio of T&D losses. Thus, it is difficult to conclude that power sector reform succeeded in reducing power subsidy since we cannot exclude the possibility that the negative

¹¹ We downloaded the state-wise data of T&D losses from the website of IndiaStat.

Table 4: Power Sector Reform and T&D Losses

Dependent variable : The ratio of T&D losses	
REFORM	11.1677 (0.00)
R-square (Within)	0.2955
F-test	3.79
P-value	0
Hausman test	15.37
P-value	0.0001
Number of States	14
Number of Observation	139

Note: P-value is in parenthesis.

impact of REFORM in Table 3 might just reflect the improvement in financial reporting by the SEBs. We plan to investigate the impact of power sector reform more thoroughly in future work.

Fifth, other explanatory variables such as PUMP, POP, and POVERTY have significant effects with the expected sign. Since the spread of electronic irrigation pumps and the

increase in cultivator population tend to expand the power subsidy for agricultural consumers, we can confirm the political influence of farmers. Besides, results showing that agricultural consumers in high poverty states are more subsidised indicates that power subsidy, apart from its effectiveness, has the features of a poverty reduction program.

Finally, since TIME has a significant effect with a positive sign in all regressions, we postulate that agricultural power subsidy tends to increase during the period. In other words, these results imply that other factors not considered in this study may affect power subsidy, which requires further analysis of the determinants of power subsidy.

4. Conclusion

This paper analyzed the effect of political instability on power subsidies. Empirical analysis supports the discussion that instability in Indian politics accelerates the opportunistic behaviour of politicians, and results in the expansion of power subsidies, which is effective in obtaining farmers' votes. It is suggested that India cannot achieve infrastructure development and sustainable growth unless it succeeds in overcoming populism. On the other hand, we could confirm the influence of farmers and mass media on power subsidy, while the impacts of election cycle and power sector reform were not found. Considering the importance of subsidy reduction for future development in India, the impact of reforming the power sector should be further studied.

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