

# Studying the Consumer Perception towards the Impact of LPG subsidy reforms on Different Classes of Consumers

Swati Chhabra

Asst. Prof. PMN College, Rajpura, Punjab, India

Email - swatimiss22@gmail.com

**Abstract:** *Subsidy on LPG cylinders is justified on the grounds of necessity of cleaner cooking fuels, otherwise people will resort to inefficient and dirt cooking methods such as firewood, agriculture waste or cow dung on chullahas. These methods cause indoor air pollution which may result in respiratory diseases and eye infections. Indoor air pollution also results in half a million deaths per year. LPG subsidies have a regressive effect means it is enjoyed more by wealthier person who can afford it and ultimately who misuse it. In the present study, data has been collected from three popular Northern states of India that are Punjab, Haryana and Chandigarh. In the study, data has been collected with the help of questionnaire.*

**Key words:** *Energy subsidies, consumer expenditure, budget, living standards*

## 1. INTRODUCTION:

Energy is one of the most important sources for poverty alleviation and economic development. In G20 summit in June 2010 it was concluded that energy subsidies are one of the important instruments used by governments of many countries to promote economic, social and environmental development. Traditional forms of energy sources expose young children to indoor air pollution which can contribute to respiratory illness. In India, indoor pollution is the main cause for 400000 pre mature deaths as concluded by Jonathan Halpern in the year 2000 in one of his paper. Subsidies not only help poor but middle and higher income group people also gain from price reduction. The Energy and Resource Institute in India estimates that 40% of the subsidies for LPG and kerosene benefits the richest 7% of the population. So subsidies develop a vicious circle where incentives once introduced are difficult to reform. But for India's economic conditions these reforms have become the necessity so this research paper concentrates on the questions like what will be the impact of reforms on poor class budget and expenditure.

## 2. LITERATURE REVIEW:

*Jonathan Halpern and Dauglas F* explained the importance of subsidizing the energy in 2000. They answered why energy should be subsidized. At the Sector level, energy is a commodity which is bought and sold. If the goal is to increase the living standards of poor, then there are other methods as well. There may be better ways for the welfare of poor people than through the energy subsidies. But in an ideal world, poor can't afford the good quality energy services due to their high access cost. For example for obtaining LPG people must apply and pay fees for service, pay a deposit for LPG cylinders, and pay in advance for their contents. This limits the ability of the poor to obtain such energy services, even though they may be able to afford the monthly energy service expenses. The poor do not have cash reserves for such fees or lump-sum purchases. Thus subsidizing the access of energy may help the poor in lowering their expenditure on cooking. In India, indoor pollution is the main cause for 400000 pre mature deaths. They provided three factors determining the subsidy usefulness such as efficacy, sector efficiency and cost effectiveness. Efficacy means subsidy must reach to those who are in real need of them. Sector efficiency means that the subsidy is structured in such a way that it encourages provision of service at least cost. Cost-effectiveness means that the subsidy achieves social goals at the lowest program cost while providing incentives to businesses to serve poor and rural populations. According to them subsidy should be indiscriminate, should be well targeted and restrictive with the end use of the energy.

*Bassam Fatouh and Laura el- Katir* published a paper on energy subsidies in the Arab world in 2012 under Arab Human Development report research paper series. The authors emphasized on the need to study energy subsidies from the view point of unintended consequences on social and economic goals. Energy subsidies lower the prices of energy. Low energy prices impose real economic costs, both in energy importing and exporting countries for example an inefficient allocation of resources; decrease in energy efficiency; rising energy consumption in absolute and per capita terms; and underinvestment in latest technology. Energy subsidies in the Arab world are given on the basis of socio economic policy objectives and on political agendas of financing the subsidies. The objectives of energy subsidies are poverty alleviation, providing social safety nets and helping the public to increase access to energy by lowering the price of energy. But actual position is different from reality. In terms of their impact on poverty alleviation, a high share of energy subsidies has been shown to be captured by higher income groups and industries. Energy subsidies benefit the poor but it is inefficient and costly tool to help the poor, hence there arises a need to reform these subsidies. The funds which are invested on subsidies can be used for other social safety nets items such as education and health services, or targeted social security programmes. Therefore, a critical factor for successful reforms will be the ability of governments to compensate their populations for the education or removal of subsidies through carefully designed mitigation measures that protect the poorest and assist the economy in its long-term adaptation. Direct cash transfer in beneficiary account has received positive responses throughout internationally and it suggests that reforms should have compensatory mitigation measures so that poor have little impact due to this.

*Jan-Jan Soon* published a research paper on Step up the Heat: A Regression Discontinuity Analysis of the effect of Home Heating Subsidy on Energy Expenditure in 2016. According to authors subsidies are for assisting the poor households in meeting their home heating and energy expenditure. Authors did household survey for different types of subsidies received on home heating energy. So authors divide the households according to their income level so as to know the eligibility criteria for subsidy receipts. Subsidies also add to high fiscal cost so it is important to know whether they are actually reducing the targeted expenditure of the individuals or not. The author developed a three stage model for energy subsidies. The results of the model were based on three estimations such as first is eligibility for subsidy increases the probability of receiving the subsidy. Second is subsidy eligibility decreases the energy expenditure. Third is subsidy receipt decreases the energy expenditure. For example according to first estimation if one is eligible for subsidies then chances for receipt of subsidies increased by 2 to 8 percent. The other point is if the individual is eligible for receipt of subsidies then his subsidy expenditure is decreased by 8 to 25 percentage point. Subsidies reduce the total energy expenditure by half to three quarters per household. If energy subsidies are removed, it will increase the budgetary expenditure by 77% for moderately poor people and 87% for extremely poor people.

### 3. OBJECTIVES:

1. To study reforms in LPG have negative impact on the budget of poor class.
2. To study removal of subsidies will increase the consumer expenditure significantly.
3. To study providing subsidized LPG cylinders help in poverty reduction of poor class.
4. To study government decision to provide subsidies only to income below 10 lacks will help out poor.

### 4. RESEARCH METHODOLOGY:

The study is based on primary as well as secondary data. The data is collected through 800 respondents of Punjab, Haryana and Chandigarh. The data of 766 respondents was selected for final review and analysis. The secondary data was selected from the research papers, newspapers, articles, thesis, dissertations and other websites related to this topic google advanced search was done.

### 5. ANALYSIS & INTERPRETATION:

The main agenda of government to provide subsidies is to help the poor and middle income group people. If these subsidies are removed then it will increase the consumer expenditure significantly. On interpreting the data presented in the Table 1.1 about the aspect that removal of subsidies will increase the consumer expenditure significantly, indicated that there is significant difference in the opinions of household and industry respondents. Almost 80% of the respondents from industry agree on the statement while this proportion is almost 70% in household sector.

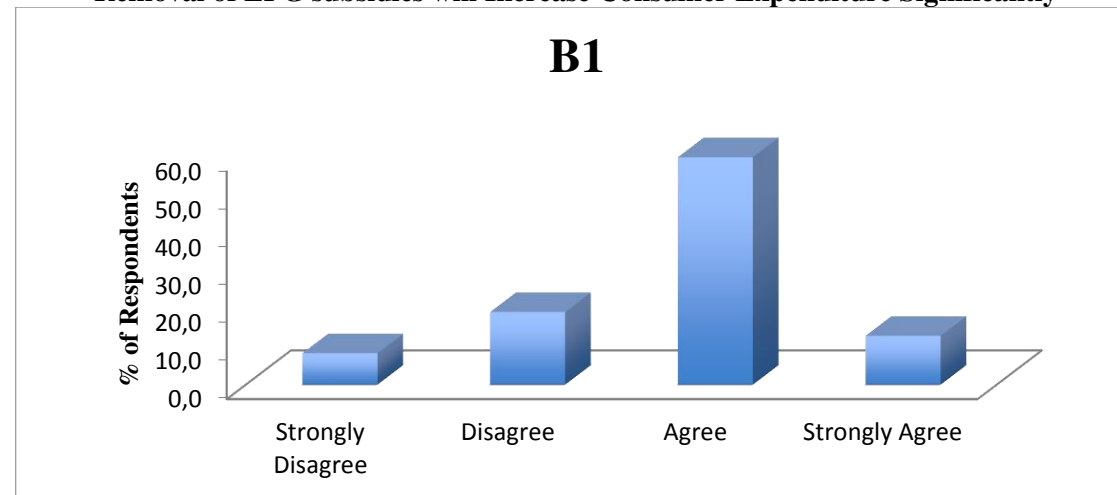
**Table 1.1**  
**Removal of LPG subsidies will Increase Consumer Expenditure Significantly**

		Answer								Total
		Strongly Disagree		Disagree		Agree		Strongly Agree		
Household/ Industry	Household	54	7.7%	141	20.2%	413	59.2%	90	12.9%	698
	Industry	9	13.6%	5	7.6%	44	66.7%	8	12.1%	66
Age	<= 30	18	7.2%	50	20.0%	164	65.6%	18	7.2%	250
	31 – 40	16	8.9%	34	18.9%	104	57.8%	26	14.4%	180
	41 – 50	17	8.2%	44	21.3%	112	54.1%	34	16.4%	207
	51 – 60	9	8.5%	14	13.2%	68	64.2%	15	14.2%	106
	>= 61	3	14.3%	4	19.0%	9	42.9%	5	23.8%	21
State	Punjab	42	9.3%	75	16.5%	291	64.1%	46	10.1%	454
	Haryana	16	5.9%	60	22.3%	146	54.3%	47	17.5%	269
	Chandigarh	5	12.2%	11	26.8%	20	48.8%	5	12.2%	41
Type of Family	Nuclear	32	6.8%	92	19.5%	296	62.8%	51	10.8%	471
	Joint	31	10.6%	54	18.4%	161	54.9%	47	16.0%	293
Gross Family Income	<=300000	30	13.6%	35	15.9%	121	55.0%	34	15.5%	220
	300000-600000	18	6.6%	54	19.9%	172	63.2%	28	10.3%	272
	600000-1000000	7	4.5%	34	21.7%	96	61.1%	20	12.7%	157
	>1000000	8	7.0%	23	20.0%	68	59.1%	16	13.9%	115
Cylinder are Consumed in a year	Up to 12	53	9.4%	95	16.8%	346	61.3%	70	12.4%	564
	12-15	8	5.5%	34	23.3%	87	59.6%	17	11.6%	146
	More than 15	2	3.7%	17	31.5%	24	44.4%	11	20.4%	54
	Total	63	8.2%	146	19.1%	457	59.8%	98	12.8%	764

In relation with the age factor, significant proportion of 65.6% respondents from less than or equal to 30 age group, a fair majority of 57.8% respondents from 31-40 age group, majority of 54.1% respondents from 41-50 age group and a good proportion of 64.2% respondents from 51-60 age group and majority of 42.9% respondents from greater than or equal to 61 age group agree with the statement indicating that removal of LPG subsidies will increase the consumer expenditure significantly. It could be further analyzed that according to type of family more than 70% respondents agree to the statement from both systems of family. Based on the data tabulated for the state factor, majority of 64.1% respondents from Punjab, majority of 54.3% respondents from Haryana and majority of 48.8% respondents from Chandigarh agree on the statement.

**Table 1.1(a)**

<b>Pearson Chi-Square tests values for studying the impact of removal of subsidies on consumer's expenditure</b>			
	Chi-square	df	Sig.
<b>Household/Industry</b>	8.169	3	.043 <sup>*</sup>
<b>Age</b>	18.640	12	.098
<b>State</b>	18.078	6	.006 <sup>*</sup>
<b>Type of Family</b>	8.965	3	.030 <sup>*</sup>
<b>Gross Family Income</b>	17.519	9	.041 <sup>*</sup>
<b>Cylinder consumed in a year</b>	15.773	6	.015 <sup>*</sup>

**Fig.1.1****Removal of LPG subsidies will Increase Consumer Expenditure Significantly**

On analyzing the gross family income factor, majority of 55.0% respondents from less than or equal to Rs 300000 income, majority of 63.2% respondents from Rs 300000 - 600000 income, majority of 61.1% respondents from Rs 600000 - 1000000 income, and majority of 59.1% respondents from greater than or equal to Rs 1000000 income age group agree to the statement in question. In relation to the cylinders consumed in a year factor, majority of 61.3% respondents who use up to 12 cylinders, majority of 59.6% respondents who use up to 12 - 15 cylinders and majority of 44.4% respondents who use more than 15 cylinders all agree that removal of LPG subsidies will increase consumer expenditure significantly. Fig. 1.1 represents the frequency of no. of respondents for the question removal of LPG subsidies will increase consumer expenditure significantly.

Table 1.1(a) defines the significant values for different factors. Using chi-square test, for household/industry, sig. value (.043 < .05) represents that there is significant difference at 5 percent level of significance, for state, sig. value (.006 < .05) represents that there is significant difference at 5 percent level of significance, for type of family, sig. value (.030 < .01) represents that there is significant difference at 1 percent level of significance, for gross family income, sig. value (.041 < .05) represents that there is significant difference at 5 percent level of significance and for cylinders consumed, sig. value (.015 < .05) represents that there is significant

difference at 5 percent level of significance between the opinions of respondents for removal of LPG subsidies will increase consumer expenditure significantly. Although for age there is non-significant difference between the opinions of respondents for removal of LPG subsidies will increase consumer expenditure significantly.

Table 1.2

## Government Decision to provide LPG Subsidies only to Income group below 10 lakh will help out Poor.

		Answer								
		Strongly Disagree		Disagree		Agree		Strongly Agree		Total
Household/ Industry	Household	28	4.0%	134	19.2%	396	56.7%	140	20.1%	698
	Industry	8	12.1%	8	12.1%	35	53.0%	15	22.7%	66
Age	<= 30	8	3.2%	48	19.2%	133	53.2%	61	24.4%	250
	31 – 40	10	5.6%	31	17.2%	102	56.7%	37	20.6%	180
	41 – 50	7	3.4%	43	20.8%	119	57.5%	38	18.4%	207
	51 – 60	10	9.4%	14	13.2%	64	60.4%	18	17.0%	106
	>= 61	1	4.8%	6	28.6%	13	61.9%	1	4.8%	21
State	Punjab	17	3.7%	82	18.1%	260	57.3%	95	20.9%	454
	Haryana	19	7.1%	50	18.6%	151	56.1%	49	18.2%	269
	Chandigarh	0	0.0%	10	24.4%	20	48.8%	11	26.8%	41
Type of Family	Nuclear	28	5.9%	82	17.4%	280	59.4%	81	17.2%	471
	Joint	8	2.7%	60	20.5%	151	51.5%	74	25.3%	293
Gross Family Income	<=300000	14	6.4%	42	19.1%	118	53.6%	46	20.9%	220
	300000-600000	14	5.1%	45	16.5%	162	59.6%	51	18.8%	272
	600000-1000000	4	2.5%	35	22.3%	89	56.7%	29	18.5%	157
	>1000000	4	3.5%	20	17.4%	62	53.9%	29	25.2%	115
Cylinder are Consumed in a year	Up to 12	29	5.1%	111	19.7%	314	55.7%	110	19.5%	564
	12-15	5	3.4%	25	17.1%	85	58.2%	31	21.2%	146
	More than 15	2	3.7%	6	11.1%	32	59.3%	14	25.9%	54
	Total	36	4.7%	142	18.6%	431	56.4%	155	20.3%	764

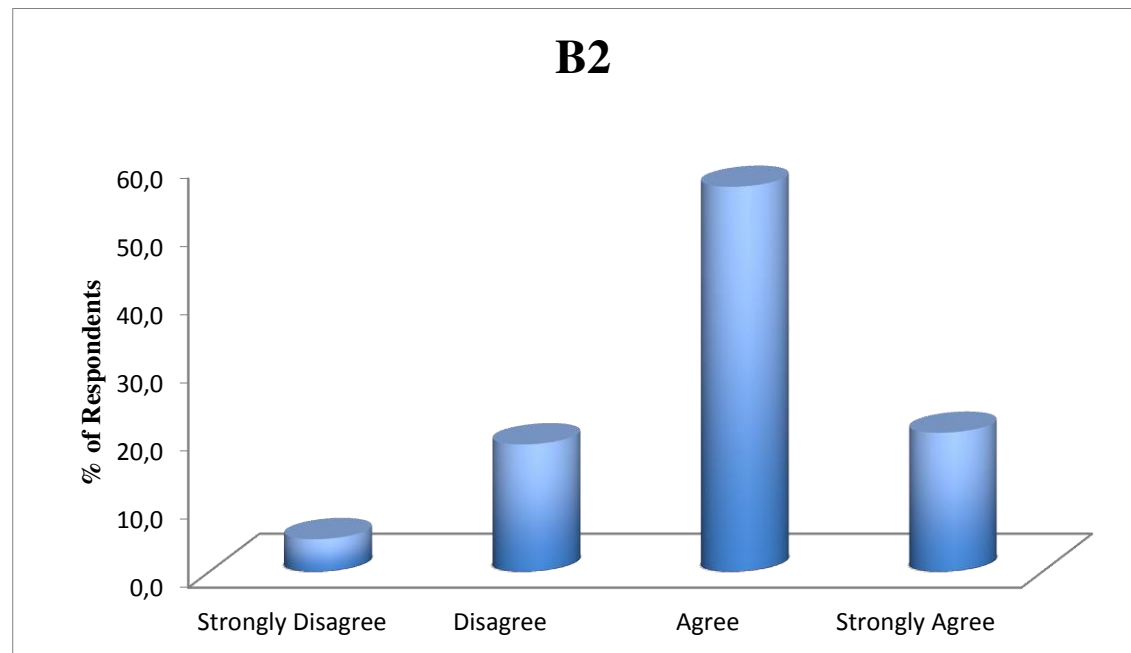
On December 2015, Government decided that not to give any subsidies to people who have income more than 10 lakh per annum. In Table 1.2, in total 76% of the respondents agree on the statement that government decision to provide LPG subsidies only to income group below 10 lacs will help out poor. Looking at the mean value it is referred that the majority of respondents from household 56.7% and industry 53.0% agree that government decision to provide LPG subsidies only to income group below 10 lakh will help out poor. From the age factor, majority of 53.2% respondents from less than or equal to 30 age group, majority of 56.7% respondents from 31-40 age group, majority of 57.5% respondents from 41-50 age group, majority of 60.4% respondents from 51-60 age group and majority of 61.9% respondents from greater than or equal to 61 age group agree with the statement. From the state factor, majority of 57.3% respondents from Punjab, majority of 56.1% respondents from Haryana and majority of 48.8% respondents from Chandigarh, from the type of family factor, majority of 59.4% respondents from Nuclear family and majority of 51.5% respondents from Joint Family agree with the statement. While analyzing the gross family income of the respondent, it is interpreted that almost 80% of the respondents from the income category more than INR 1000000 agree on the statement in the question. While comparing the other income categories, almost 75% from each category agree with the statement.

Table 1.2(a)

Pearson Chi-Square Tests values Showing Significance of the results			
	Chi-square	df	Sig.
Household/Industry	10.399	3	.015*
Age	17.264	12	.140
State	8.811	6	.184
Type of Family	12.662	3	.005*
Gross Family Income	8.103	9	.524
Cylinder consumed in a year	4.304	6	.636

Fig. 1.2

Government Decision to provide LPG Subsidies only to Income group below 10 lakh will help out Poor.



From the cylinders consumed in a year factor, majority of 55.7% respondents who use up to 12 cylinders, majority of 58.2% respondents who use up to 12 - 15 cylinders and majority of 59.3% respondents who use more than 15 cylinders all agree that government decision to provide LPG subsidies only to income group below 10 lakh will help out poor. Fig. 1.2 represents the frequency of no. of respondents for the question government decision to provide LPG subsidies only to income group below 10 lakh will help out poor. According to Christian Ebeke, subsidies carry distributional effects as they are more consumed by the wealthier persons as compared to the poor. Authors described it with the help of political game between middle and elite class people to examine the allocation of public resources and between energy subsidies

and public social spending. The results 1% point increase in energy subsidies to GDP leads to reduction of public spending on education by .6% point revealing the fact that by curbing the subsidies for elite class there will be more social spending and facilities for the poor.

As subsidies are targeted especially for poor, if these subsidies are removed then it will adversely impact the budget of poor class as shown in the Table 3.27, Table 3.27(a) and fig 3.27. A fairly large proportion from the household respondents agree on the statement that removal of subsidies will adversely impact the budget of poor class. However there is significant difference in the opinions of respondents of different age category. There are only 42% respondents from the category more than 61 age who agree on the statement while this proportion is fairly large in case of respondents falling under the age 41-50 i.e. 59%. In analyzing the state factor, there are almost 27% respondents who strongly agree with the statement from Haryana state while this proportion is just 17% from Chandigarh. Respondents from different family system share same point of view. There is no significant difference in their opinions ( $p = .595$ ). In analyzing the data from different income categories, it is interpreted that majority of the respondents (82%) from income category more than 10 lacs agree with the statement that removal of subsidies will impact the budget of poor class adversely.

**Table 1.3**  
**Removal of Subsidies adversely Impact the Budget of Poor Class**

		Answer								
		Strongly Disagree		Disagree		Agree		Strongly Agree		Total
Household/ Industry	Household	36	5.2%	116	16.6%	375	53.7%	171	24.5%	698
	Industry	6	9.1%	8	12.1%	30	45.5%	22	33.3%	66
Age	<= 30	12	4.8%	38	15.2%	134	53.6%	66	26.4%	250
	31 - 40	13	7.2%	34	18.9%	92	51.1%	41	22.8%	180
	41 - 50	4	1.9%	27	13.0%	123	59.4%	53	25.6%	207
	51 - 60	13	12.3%	17	16.0%	47	44.3%	29	27.4%	106
	>= 61	0	0.0%	8	38.1%	9	42.9%	4	19.0%	21
State	Punjab	27	5.9%	69	15.2%	246	54.2%	112	24.7%	454
	Haryana	12	4.5%	46	17.1%	137	50.9%	74	27.5%	269
	Chandigarh	3	7.3%	9	22.0%	22	53.7%	7	17.1%	41
Type of Family	Nuclear	25	5.3%	70	14.9%	254	53.9%	122	25.9%	471
	Joint	17	5.8%	54	18.4%	151	51.5%	71	24.2%	293
Gross Family Income	<=300000	20	9.1%	35	15.9%	117	53.2%	48	21.8%	220
	300000-600000	17	6.3%	41	15.1%	137	50.4%	77	28.3%	272
	600000-1000000	3	1.9%	30	19.1%	84	53.5%	40	25.5%	157
	>1000000	2	1.7%	18	15.7%	67	58.3%	28	24.3%	115
Cylinder are Consumed in a year	Up to 12	33	5.9%	88	15.6%	295	52.3%	148	26.2%	564
	12-15	9	6.2%	23	15.8%	83	56.8%	31	21.2%	146
	More than 15	0	0.0%	13	24.1%	27	50.0%	14	25.9%	54
	Total	42	5.5%	124	16.2%	405	53.0%	193	25.3%	764

From other income categories, more than 75% of the respondents agree on the statement that removal of subsidies will impact the poor class budget adversely. Table 1.3(a) shows the significant values using chi square test at 1 % level of significance. For age, sig. value (.004 < .01) represents that there is significant difference at 1 percent level of significance between the opinions of respondents that removal of subsidy will increase consumer expenditure significantly.

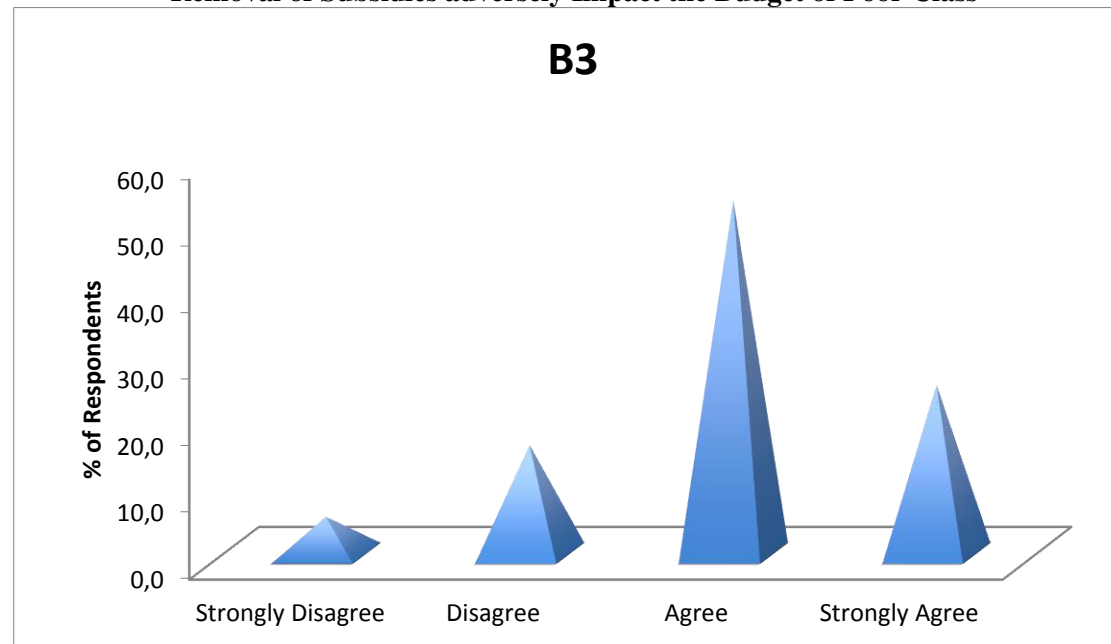


Table 1.3(a)

Pearson Chi-Square Tests values showing significance at different factors			
	Chi-square	df	Sig.
Household/Industry	5.090	3	.165
Age	29.133	12	.004*
State	4.220	6	.647
Type of Family	1.892	3	.595
Gross Family Income	16.178	9	.063
Cylinder consumed in a year	7.132	6	.309

Fig.1.3

## Removal of Subsidies adversely Impact the Budget of Poor Class



Although for household/industry, state, type of family, gross family income and cylinders consumed in a year there is non-significant difference between the opinions of respondents that consumers' expenditure will increase significantly. *Subsidies reduce the total energy expenditure by half to three quarters per household. If energy subsidies are removed, it will increase the budgetary expenditure by 77% for moderately poor people and 87% for extremely poor people, concluded by Jan Jan Soon in his publishing Step up the Heat: A Regression Discontinuity Analysis of the effect of Home Heating Subsidy on Energy Expenditure in 2016.*



**Table 1.4**  
**Providing LPG at subsidized rate to the Poor class can help in Poverty Reduction**

		Answer								
		Strongly Disagree		Disagree		Agree		Strongly Agree		Total
Household/ Industry	Household	40	5.7%	140	20.1%	393	56.3%	125	17.9%	698
	Industry	3	4.5%	18	27.3%	32	48.5%	13	19.7%	66
Age	<= 30	17	6.8%	45	18.0%	139	55.6%	49	19.6%	250
	31 - 40	11	6.1%	41	22.8%	97	53.9%	31	17.2%	180
	41 - 50	11	5.3%	39	18.8%	121	58.5%	36	17.4%	207
	51 - 60	4	3.8%	26	24.5%	57	53.8%	19	17.9%	106
	>= 61	0	0.0%	7	33.3%	11	52.4%	3	14.3%	21
State	Punjab	28	6.2%	82	18.1%	262	57.7%	82	18.1%	454
	Haryana	12	4.5%	69	25.7%	139	51.7%	49	18.2%	269
	Chandigarh	3	7.3%	7	17.1%	24	58.5%	7	17.1%	41
Type of Family	Nuclear	23	4.9%	100	21.2%	264	56.1%	84	17.8%	471
	Joint	20	6.8%	58	19.8%	161	54.9%	54	18.4%	293
Gross Family Income	<=300000	14	6.4%	46	20.9%	117	53.2%	43	19.5%	220
	300000-600000	18	6.6%	55	20.2%	150	55.1%	49	18.0%	272
	600000-1000000	6	3.8%	33	21.0%	93	59.2%	25	15.9%	157
	>1000000	5	4.3%	24	20.9%	65	56.5%	21	18.3%	115
Cylinder are Consumed in a year	Up to 12	32	5.7%	116	20.6%	312	55.3%	104	18.4%	564
	12-15	8	5.5%	32	21.9%	80	54.8%	26	17.8%	146
	More than 15	3	5.6%	10	18.5%	33	61.1%	8	14.8%	54
	Total	43	5.6%	158	20.7%	425	55.6%	138	18.1%	764

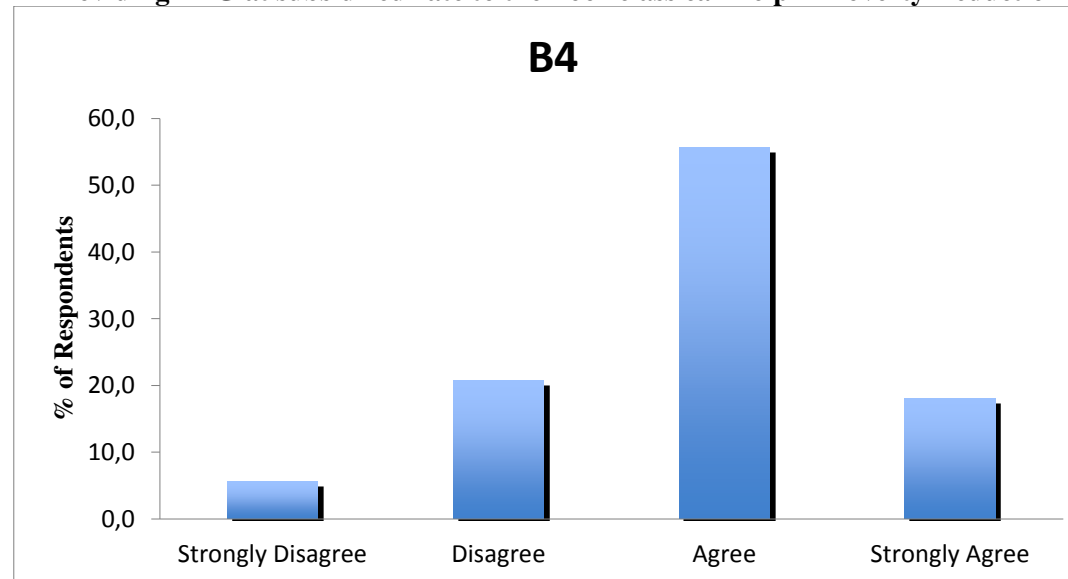
Poverty reduction is a relative term depending upon the consumers' expectation and income level. Looking at the mean values in Table 1.4 it is referred that the 56.3% respondents from household sector and 48.5% of the respondents from industry agree that providing LPG at subsidized rate to the poor class can help in poverty reduction.

Table 1.4(a)

Pearson Chi-Square Tests Values for Poverty Reduction			
	Chi-square	df	Sig.
Household/Industry	2.438	3	.487
Age	7.642	12	.812
State	7.268	6	.297
Type of Family	1.466	3	.690
Gross Family Income	3.274	9	.952
Cylinder consumed in a year	.927	6	.988

Fig. 1.4

Providing LPG at subsidized rate to the Poor class can help in Poverty Reduction



In relation with the age factor, majority of 55.6% respondents from less than or equal to 30 age group, majority of 53.9% respondents from 31-40 age group, majority of 58.5% respondents from 41-50 age group, majority of 53.8% respondents from 51-60 age group and majority of 52.4% respondents from greater than or equal to 61 age group agree on the statement that providing LPG at subsidized rate help in poverty reduction. From the state factor, majority of 57.7% respondents from Punjab, majority of 51.7% respondents from Haryana and majority of 58.5% respondents from Chandigarh agree with the statement in question. From the type of family factor, majority of 56.1% respondents from Nuclear family and majority of 54.9% respondents from Joint Family, From the gross family income factor, majority of 53.2%

respondents from less than or equal to Rs 300000 income, majority of 55.1% respondents from Rs 300000 - 600000 income, majority of 59.2% respondents from Rs 600000 - 1000000 income, and majority of 56.5% respondents from greater than or equal to Rs 1000000 income age group and from the cylinder consumed in a year factor, majority of 55.3% respondents who use up to 12 cylinders, majority of 54.8% respondents who use up to 12 - 15 cylinders and majority of 61.1% respondents who use more than 15 cylinders all agree that providing LPG at subsidized rate to the poor class can help in poverty reduction. Fig. 1.4 represents the frequency of no. of respondents for the question subsidized providing LPG at subsidized rate to the poor class can help in poverty reduction. None of the given factors show the significant results as subsidies on LPG don't help in poverty reduction as shown in table 1.4(a). *Well concluded by Rimawan Pradiptyoin in a literature survey in Indonesia for social welfare of subsidies that subsidies were started for supporting economic growth, poverty reduction and promoting energy security but due to misallocation of resources, well off consumers enjoy more subsidies as compared to poor class so argument for poverty reduction got failed.*

## 6. CONCLUSIONS:

In nutshell, it can be concluded that subsidies have twin impacts i.e. positive and negative impacts both. On the one side subsidies help in economic development of the country and on the other side subsidies lead to worsened fiscal deficits due to increased government expenditure. On the one side, it has led to socio economic development of the poor people on the other side their removal is necessary as it adversely impact the budget of government. On the one side it impacts the budget of government and if these are removed then budget of poor class will highly be affected. On the one side it is said that subsidies help in poverty reduction but on the other side their removal will generate more income to the government so it will increase the real income of the consumers by reduction in other energy taxes.

## REFERENCES:

1. Barnes F., D., & Halpern, J. (2000). *The role of energy subsidies. Energy Services for the World's Poor. Energy and Development Report 2000* (Vol. 7).
2. El-katiri, L. : *Energy Subsidies in the Arab World Energy Subsidies in the Arab World.* (2012).
3. Soon, J.-J. : *Step Up The Heat: A Regression Discontinuity Analysis Of The Effect Of Home Heating Subsidy On Energy Expenditure. International Journal of Business and Society, 17(1), 81–98.* (2016).
4. Modi N.: *Urja Sangam 2015- India's Global Hydrocarbon Summit. Press Information Bureau, Government of India, Ministry of Petroleum and Natural gas(2)* (2015) <http://pib.nic.in/newsite/PrintRelease.aspx?relid=117787>
5. Press Trust of India(2016). ' 1.5 crores LPG connections issued to Below Poverty LineHouseholds'. *NDTV Profit.*(December 29)
6. IMF. : *Case Studies on Energy Subsidy Reform: Lessons and Implications,* (2013).
7. GSI. : *India Energy Subsidy Briefing, 1(June), 1–4.* (2015).