Factors Influencing the Enterprises Receiving Subsidies In Transitional Economies

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Abstract: *This paper used a set of survey data on 32094 firms in 28 transition countries for the time period from 1999 to 2009, in order to examine the factors influencing the probability of receiving subsidy. "EBRD-World Bank Business Environment and Enterprise Performance Survey (BEEPS)" data set has been used in this work. The study reveals that firm's performance is not a significant fact to influence the probability of receiving subsidy. Firm's financial strength, connection with the government, and whether its nature of product market are the major factors determining the probability of receiving subsidy. Providing subsidy is not found to be the paternalistic attitude of the state rather state's economic and political interest play the crucial role in decision making.*

Key words: Transitional economies, probability of subsidy, Government.

1. Introduction

Governments usually grant different subsidies to the business sector in order to promote growth. According to the definition of the SBC (Soft Budget Constraint), subsidy is paid to loss-making firms to guarantee their survival. In literature Subsidy is categorized as "Soft Budget Constraint" and the term was introduced by Kornai (1979). Kornai describes the soft budget phenomenon as "firms are bailed out persistently by state agencies when revenues do not cover costs". Normally, enterprises believe that any losses they incur will be made good by the government. There are two specific theories describing the cause of government subsidy. The first one is government's goal to provide economic security for enterprise employees and supply social services (Kindergartens, schools, hospitals, recreation facilities) in the enterprise. So, providing subsidy is the paternalistic attitude of the government (Kornai, 1984). On the other hand, it is said that politicians use government subsidies to induce firms to maintain a higher-than-efficient level of employment in order to enlarge their own political constituency (Boycko *et al.*, 1996). Thus, we have the general view that subsidy is given to the poor performing firms.

But state does not only provide grants or subsidies for poor performing firm. Studies also revealed that state provides more support to firms which are more taxable (Scott, 2003). So, often subsidy is provided to well performing firms to increase government's tax revenue. Thus, literature clearly indicates that there is a debate over the fact that which firms receive subsidy. On the other hand, firms which are potential recipients of subsidies might, if the pay-off is high enough, become highly engaged in subsidy-seeking activities (e.g., lobbying). So, the financial strength and relation with government (political connection or lobbying) also become a determining factor for receiving the subsidy

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(Bergström, 2000). Ownership of the firm is another factor that influences the probability of receiving the subsidy as, in general, state provides subsidy to state owned enterprises (SOEs). Also, export oriented firms are more likely to receive subsidy as government always wants to keep the export earning stable. So, the reality contradicts with the general view.

The objective of this study is to identify the factors influencing the probability receiving subsidy by the firms. The study will examine the sources of various supports to the firms under study and their relationships with the various attributes like performance, locations, forms of ownership, employment volume, nature of industry and markets being served etc. Though we know some common factors influencing the probability of receiving subsidy, there are several reasons behind the need for more empirical studies in this issue particularly in transitional countries. First reason is most of the studies used cross sectional country level data and used the data up to year 2000. So, the major difference with the other studies is that, this work will use the panel data set covering from year 1999 to 2009 for all the transitional countries. The second reason is study on the transitional country is often done as most of the countries are post communist and have transformed into market economy. During the last decade a large scale privatization policy has been taken in most of the countries and has entered in EU or joined WTO. So, providing subsidy which is a form of government intervention is one of the most debatable policy issues in those countries.

This article will proceed with the following sections – section-II is the Political Economy of Subsidy, which shows the economic and political reasons of providing subsidy in the context of Transitional Economies (TEs). Section-III is Data Description; section- IV describes summary Statistics. Section-V is the presentation of the empirical model, in section –VI, estimation methodology and the estimated results are mentioned and section-VII will describe the conclusion.

2. The Political Economy of Subsidy

The reason why Government usually provides subsidy for poor performing firms is - first, if the subsidies helps to advance the technological development of the recipient firms then productivity of the firm increases. Second, if the subsidies can help the firms to utilize economies of scale better, productivity may increase as well. As a result, firms will perform well. But besides this channel in reality we find that there is also negative relationship between subsidy and firm's performance. There is a high incentive for the firms to keep the performance poor to attract more subsidy as generally government gives subsidy to poor performing firms. So, according to the theory we might find any inverse relation between firm performance (usually measured by firm's sales growth) and probability of receiving subsidy or poor performing firms should receive more subsidy.

Evidences do not support the general view that state mainly provides subsidy for failing firms. For example, a study on 23 post communist countries demonstrates that the state provides more support along a variety of dimensions to firms which are more taxable, i.e. firms from which the state can extract a greater share of revenues (Scott, 2003). Also, according to the theory of privatization, state provides subsidies to induce firms to

maintain higher levels of employment (Boycko *et al*., 1996). So, large firms (in terms of employment) should have higher probability of receiving subsidy. Again Schaffer (1997) in his study found that, the main route of subsidy in the TEs is via tax arrears. Firms have lobbied successfully for government bailouts to clear inter enterprise arrears. So, all these evidences clearly indicate that it is not necessarily true that poor performing firms generally receive more subsidies. The political and economic relation plays the most important role in case of receiving subsidy.

3. Survey Overview and Data Description

3.1 Data Source

We have used "EBRD-World Bank Business Environment and Enterprise Performance Survey (BEEPS)" data set. This survey is a joint initiative of the European Bank for Reconstruction and Development (EBRD) and the World Bank Group (the World Bank). First round was conducted by EBRD and World Bank in 1999-2000 surveying 4104 enterprises in 26 transition countries: Albania, Armenia, Azerbaijan, Belarus, Bosnia, Bulgaria, Croatia, Czech Republic, Estonia, FYR Macedonia, Georgia, Hungary, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, Moldova, Poland, Republika Srpska, Romania, Russia, Slovak Republic, Slovenia, Ukraine, Turkey and Uzbekistan. Second round was undertaken in 2002 for 27 countries and 6,667 enterprises including Tajikistan. The third round undertaken in 2005 contained the same countries as in 2002 but has more enterprises: 9655. Finally in 2009 the fourth round was undertaken and included approximately 11800 firms in 28 countries, including Mongolia for the first time.

Interviews were carried out face-to-face rather than through postal or telephone approaches. The survey was conducted using a quota sample, rather than by simply taking company names at random. Quotas were placed on industry sector, size and location

3.2 Description of the Variables

This subsection describes the variables that are used in the model. The key variable of this analysis is *Subsidy*, which is the dependent variable. *Subsidy* is a dummy variable taking "1- if the firm receives subsidy for the last three years" and "0-if the firm does not receive subsidy". In the questionnaire there is three sub categories of the source of subsidy (national government, local government and other sources) and this paper considers each of them.

The independent variables are - sales growth rate of the firm (*Salegrw)* shows firm's last 3- year sales growth rate in percent. This shows the last three years sales growth rate of the firm for each of the years. The variable is directly taken from the questionnaire as there is a specific question asking about the sales growth rate for the last three years. *Fowner* is firm ownership. This variable takes "1-if it is domestic private", "2-if foreign private" and "3- if state owned". In case of foreign firm if 25% of the share is owned by foreigner then it is considered as foreign firm. The variable *Pfixcgrw* shows firm's 3-year fixed asset growth rate in percentage. This variable is included as it also affects the sales growth rate. This variable is not available for 1999 and 2009. *Fsize* is "Firm Size in terms

of number of full time employee". Three separate dummy variables will be created - *Fsize_small, Fsize_medium* and *Fsize_large*. A firm is 'small' if the number of full time employee is 2-49 and 'medium' if it is 50 to 249 and large if the number is over 250. For 1999 the medium category contains 50-199 employees. The variable E*mpgrw* shows firm's "3-year full-time employment growth, in percentage". In 2009 survey, there are two subcategories of the full-time worker- permanent full timer and seasonal full timer. We include both of them as a full time worker and manually calculate the growth rate. The coefficient should have a positive sign.

Indust is "Industry type". This dummy variable is taken as a controlled variable where -1 "Mining", 2 "Construction", 3 "Manufacturing", 4 "transportation/Communication", 5 "Trade", 6 "Business services", 7 "Hotels/restaurants", 8 "Others". For 2009 data set we have used industry code to categorize them and keep the consistency with other years. Because of the pattern of the questionnaire this exception belongs. *Export* is another dummy variable which takes the value 0 "if the firm do not export" and 1 "if the firm exports". Country is the dummy variable to represent the countries and Year is year dummy for 1999, 2002, 2005 and 2009. All the variables are described in Table 1.

4. Summary Statistics

Summary statistics of all continuous and categorical variables for the overall sample is shown in table 2. The mean value of firm's sales growth is 35.18 for the overall sample and in the model it is 15.71. The table shows that in the overall sample about 10.27% firms received subsidy and in the model the percentage is 12.34.

The mean value of firm's employment growth rate and fixed asset growth rate is 11.60 and 14.65 respectively. If we look at the firm size it shows that in the total observation 62% firms are small, and 12% are large. Also, most of the firms are domestic (78%). It also shows that about 26% firms export their products. Finally, total number of observation is 32094. For the model we have 8911 observations. The number falls as the variable subsidy and fixed asset growth rate is not available for year 2009 and 1999. And outliers are controlled.

Figure 1 shows in 1999 about 9.84% of the total firms (321 firms) received any kind of subsidy from either national government or local government or from other sources (e.g. EU or other). In 2002, it became 12.45% (505 firms) and in 2005 it was 12.14% (703). In 2009 about 999 enterprises received subsidy which is 8.67% of the total number of firms surveyed. So, the number of firms which receives subsidy is not that large. Figure 2 shows the ownership wise distribution of the firm which received subsidy from any source. We can see that in each year except 2002 domestic owned firms were the dominant firm in receiving subsidy. In 1999 among the subsidy receiving firms 50% were domestic (45% were state owned and 5% foreign private) but in 2009 the share became 80% (state owned firm's share was 7.39% and foreign private firm's share was 12.01%). Thus the figure shows that in transitional countries the government or other organizations became more interested in giving subsidy to domestic owned firms.

Table 3 shows the categories of the industry. We can see that most of the firms are manufacturing (35%) and trade comes in the second position (29.4%) and rest of them is below 10%. On the other hand, in total number of subsidy receiving firms, manufacturing

firms have the highest share (41.89%) then trade firms (16.14%) and then comes the transport/communication related firms (9.3%). Table 4 shows the relationship between the subsidy and export. It shows that among the subsidy receiving firms 57.91% are export oriented firms and 42.09% are non exporting firms.

5. Model Description

To find out which factors affects the probability of receiving subsidy the following model will be used as the base line model:

$Subsidy_{i,t,c} = \beta_0 + \beta_1 Salegrw_{i,t,c} + \beta_2 Fempgrw_{i,t,c} + \beta_3 Pfixcgrw_{i,t,c} + \beta_4\ Expor_{i,t,c} + \beta_5 Fowner_{i,t,c} + \beta_6\ Fsize\_medium_{i,t} + \beta_7\ Fsize\_large_{i,t} + \beta_6\ Indust_{i,t,c} + \beta_{12} Country_c + \beta_{13} Year_t + \varepsilon_{i,t,c}$

The dependent variable is the binary variable, which is defined as *Subsidy*=1 if firm receives subsidy and *Subsidy*=0, if firm does not receive subsidy. The explanatory variables of the model are- *Salegrw$_{i,t,c}$* is ith firm's "3-year sales growth rate in percentage", *Fowner$_{i,t,c}$* is "Ownership of the firm" (*Fowner$_{i,t,c}$*= 1 if domestic private, =2 if foreign private, = 3 if state owned firm). *Fsize$_{i,,t}$* is "Size of the firm" (in terms of labor employment) Where, *Fsize_medium$_{i,t}$* = 1, if the firm size is medium (number of full time employee 59-249) and *Fsize_large$_{i,,t}$* = 1, if the firm size is large (number of full time employee 250-9999). *Empgrw$_{i,t,c}$* is "3-year full-time employment growth, in percentage", *pfixctgrw$_{i,t,c}$* is firm's 3-year fixed assets growth rate (in percentage), *Indust$_{i,t,c}$* is Industry (set of dummy)to categorize the firm. Where, *Indust$_{i,t,c}$*=1 "Mining", 2 "Construction", 3 "Manufacturing", 4 "transportation/Communication", 5 "Trade", 6 "Business services", 7 "Hotels/restaurants", 8 "Others". *Expor$_{i,t,c}$* is Export which shows whether the firm exports or not. *Expor$_{i,t,c}$* = 0 if the firm do not export, *Expor$_{i,t,c}$* = 1 if the firm exports. *Country$_c$* is Country dummy variable and this variable captures the difference across countries. So, by including this variable this effect is kept constant across individual observations. *Year$_t$* is Year dummy for the four years 1999, 2002, 2005 and 2009 which will also capture the changes over time and keeps the time effect constant. $\varepsilon_{i,t,c}$ is the error term.

Fowner or firm ownership is a dummy variable which is included as it affects the probability of receiving subsidy. *Fsize_medium* and *Fsize_large* is included to capture the impact of firm size and the coefficients of those variables will show the impact of firm size on the probability of receiving subsidy compared to the omitted category *Fsize_small* (small firm). Employment growth rate (*Empgrw*) and fixed asset growth rate (*pfixgrw*) are included as all of them affects firm's sales. The variable Export shows if the firm exports or not. This variable may also influence firm's probability of receiving subsidy. Industry category of the firms (*indust*) is included as there might be possible biasness towards specific industry in case of probability of subsidy reception.

6. Estimation Methodology and Empirical Results

6.1 Estimation Methodology

In this paper we have used both the Linear Probability Model (LPM) and Probit Model to find out the influences of various factors on probability of receiving subsidy by different firms. Using LPM, we can find out the probability of receiving subsidy of a firm due to a one unit change in one of the factors holding other factors constant. But there are several

problems of using LPM e.g., non normality of the disturbance term, heteroscedasticity of the disturbance term, possibility of expected y_i values lying outside the 0-1 range and generally lower R-square values. But almost all the problems are surmountable. The most serious problem is that it assumes that probability of something happening increases linearly with X, that is the marginal or incremental effect remains constant throughout.

This restrictive assumption of LPM can be avoided if we use logit or probit model. In this paper we have used probit model (dprobit is used in STATA 9.1). The probit model shows the marginal effects calculated at the mean value of each explanatory variable. Each of the estimates shows the change in probability for an infinitesimal change in each dependent, continuous variable and by default reports the discrete change in the probability for the dependent variable.

6.2 Regression Results

Various specifications of the Model are reported in table 5. Equation (1) was developed to examine which factors influence the probability of receiving subsidy. Table 5 shows the regression results where column (1) specifies the results when Linear Probability Model (LPM) is applied and column (2) shows when Probit model is applied. In both cases 'Subsidy' is the dependent variable.

In LPM all the coefficients are showing the probability of receiving subsidy. The probability of receiving subsidy increases if sales growth rate increases, holding other variables fixed. But the probability (0.0000461) is very small and also not statistically significant. The probability of receiving subsidy also increases by .000335 if fixed asset growth rate increases. Here the probability increases by a very small number though it is statistically significant. Again probability of receiving subsidy decreases by .00413 if there is an increase in employment growth rate. So all these results indicate that probability of receiving subsidy do not vary that much by firm's performance (sales and employment growth rate).

On the other hand, if the firm is export oriented then probability of receiving subsidy increases by .0270, holding all other variables fixed and it is statistically significant. Again, if the firm is a foreign firm rather than a domestic private firm, then probability of receiving subsidy decreases by .0283 (holding all other factors constant) which is also statistically significant. And if the firm is state owned then probability of receiving subsidy increases by a large number, 0.198 holding all other variables fixed and it is also statistically significant. So, ownership is an influencing factor. Firm size plays a crucial role in determining the probability of receiving subsidy as the regression result shows that if the firm is large, then probability increases by 0.120 compared to small firms and the probability also increases by .0720 if the firm is medium sized rather than small. Both the values are statistically significant. Country and year dummy variables are included in this regression analysis but none of them are statistically significant.

Column (2): Column 2 shows the results using probit model (dprobit in STATA). Holding other variables at the specified value, 1% increase in firm's sales growth rate increases the probability of receiving subsidy by 0.0000543 percentage points, where the marginal effect is calculated at the mean value. Similarly, fixed asset growth rate has a positive marginal effect on subsidy. The coefficient, 0.00025 is small but statistically

significant. Employment growth rate has an inverse and insignificant marginal effect on probability of receiving subsidy. If the firm is export oriented then the probability of receiving subsidy increases by 0.0233 percentage points from its mean value, holding all other variables constant and this is statistically significant. The result also shows that there is no significant biasness towards industry category in case of influencing the probability of receiving subsidy.

The negative coefficient (-0.0200) of foreign private firms shows the lower marginal effect on the probability of receiving subsidy than the domestic private firms. But if the firm is state owned, then the probability of receiving subsidy increases by 0.164 percentage points from its mean value, holding all other variables constant. This is a large value which is also statistically significant. On the other hand, the marginal effect of large firms and medium firms both have positive marginal effect on subsidy holding all other variables constant, where both the effects are statistically significant. This indicates the same result as in LPM that both ownership and firm size are determining factors of receiving subsidy.

7. Conclusion

This paper examines the factors which influence the probability of receiving subsidy. The general view is that poor performing firms should receive most of the subsidies because of the state's paternalistic behavior. One of the arguments behind this is- the state does not want to bear the social costs of unemployment. But the main finding of the paper is that the firm's performance is not a significant factor influencing the probability of receiving subsidy. Rather, we have found that there is a positive and significant effect of firm size, export orientation, and ownership of the firm respectively on the probability of receiving subsidy. Large, state owned and export oriented firms have higher probability in that case. Past studies on transition economies indicate that large firms are often involved in a great deal of lobbying for subsidies in the form of 'tolerance of tax arrears'. Firms often pay a significant part of their revenues (not profits) as bribe to government officials to have subsidies. On the other hand, governments also provide subsidy to large firms to increase their tax revenue collection. This also supports our finding that the financial strength and good relation of large firms with government and other donors ensure the flow of subsidy.

In conclusion it can be said that subsidization policy is not only an economic issue. A great deal of politics and trade related strategies are related in the decision making. The findings of the paper may be useful to consider in case of policy making with regard to efficient resource allocation, especially for the transitional economies as well as for other economies.

References

1. Bergström, F. (2000). Capital Subsidies and the Performance of Firms, *Small Business Economics* 14: 183–193.
2. Boycko, M., Andrei, S., and Robert, W. V. (1996). A Theory of Privatisation, *Economic Journal*, 106(435), pp.309–19, March.
3. Djankov, S., and Murrell, P. (2002). Enterprise Restructuring in Transition: A Quantitative Survey, *Journal of Economic Literature*, v. 40, iss. 3, pp. 739-92. World Bank; IRIS Center.
4. Earle, J., and Estrin, S. (2003). Privatization, Competition, and Budget Constraints: Disciplining Enterprises in Russia, *Economics of Planning* 36:1-22.
5. Gehlbach, S. (2003). Taxability and Government Support of Business Activity: Testing Theories of Social-Contract Failure, CEFIIR working paper number w0030.
6. Kornai**,** J. (1986). The Soft Budget Constraint", *Kyklos***,** Blackwell Publishing**,** vol. 39**(**1**).**
7. Moersl, L. (1999). Determinants of enterprise restructuring in transition: description of a survey in Russian industry, *Tinbergen Institute Discussion Paper, no. 2000-026/2*,
8. Schaffer, M. E. (1997). Do firms in transition have soft budget constraints? A reconsideration of concepts and evidence, Centre for Economic Reform and Transformation, Department of Economics, Heriot-Watt University, Edinburgh, UK.
9. Shleifer, A., and Vishny R. W. (1994). Politicians and firms, *Quarterly Journal of Economics*, Vol. 109 pp.995 - 1024
10. Wendy, C., Steven, F., Mark, S., and Paul, S. (2001). Competition and Enterprise Performance in TransitionEconomies: Evidence from a Cross-country Survey, *Journal of Economic Literature*, Working Paper No. 376.

Appendix

Table 1: Description of Variables

Variables	Name and Description	Note
Salegrw$_{i,t,c}$	3- year sales growth rate in percent	For 2009, 3-year sales growth was calculated manually from given sales values for 2007 and 3 years ago.
Subsidy$_{i,t,c}$	Subsidy =1, if the firm receives subsidy = 0, if the firm does not receive the subsidy.	Subsidy from any source (national government, local government or other source is considered.
Fowner$_{i,t,c}$	Firm ownership = 1 if domestic private, =2 if foreign private, = 3 if state owned firm	Foreign firm is identified as a firm that has more than 25% of shares owned by foreigners
Fsize_small$_{i,t}$	Firm Size in terms of number of full time employee =1, small (number of full time employee 2-49)	For 1999, medium firm is 50-199 employees, and therefore large firm is over 200.
Fsize_medium$_{i,t}$	=1, medium (number of full time employee 59-249)	
Fsize_large$_{i,t}$	=3, large (number of full time employee 250-9999)	

Fempgrw$_{i,t,c}$	3-year full-time employment growth, in percentage	For year 2009 - permanent full timer and seasonal full timer is added up to find out the full-time employer.
Pfixctgrw$_{i,t,c}$	3-year fixed assets growth rate (in percentage	The variable is missing for year 1999 and 2009
Indust$_{i,t,c}$	Industry category 1 for "Mining", 2 "Construction", 3 "Manufacturing", 4 "transportation/Communication", 5 "Trade", 6 "Business services", 7 "Hotels/restaurants", 8 "Others".	For year 2009 the industry code is used and the categorization is done manually
Expor$_{i,t,c}$	=0, if the firm do not export = 1, if the firm exports	If a firm sells 100% domestically then it's a non exporting firm
Country$_c$	Country dummy	
Year$_t$	Year dummy	
$\varepsilon_{i,t,c}$	Error term	

(Source: Own calculation)

Table 2: Summary Statistics for all Variables

Variables		All Observation	Model
		Mean	Mean
Salegrw		35.18	15.71
3-year sales growth rate in %	(101.17)	(52.86)	
Fempgrw		11.60	0.26
3-year full time employment growth rate in %	(56.64)	(1.21)	
pfixcgrw		14.65	13.05
3- year fixed asset growth rate in %	(46.64)	(44.51)	
		%	%
Subsidy		10.27	12.34
1, if firm receives subsidy			
Firm Size (number of full time employee)			
Fsize_large (>250)		12.83	11.56
Fsize_medium (50-249)	23.29	19.48	
Fsize_small (2-49)		62.78	68.97
Firm ownership			
Domestic private		78,11	76.21
Foreign private		11.95	11.87
State owned		9.93	11.92
export (if firm exports)	26.31	26.24	
Indust category			
Mining		2.01	1.24
Construction		9.80	10.73
manufacturing		35.98	34.26
Transport/communication	6.26	7.05	
Trade		29.43	25.76

|		
Business services	6.00	9.45
Hotels/restaurants	5.10	5.59
Other service	5.43	5.92
N	**32094**	**8911**

Note: Standard deviations for all the continuous variables are in parenthesis. Summary statistics are for years 1999, 2002, 2005 and 2009 respectively. For the variables - Salegrw and Fempgr, the observations above 1000 and below -99 were considered as outliers. For the variable, export, if a firm sells 100% of the output domestically it is considered as a non exporting firm.

Figure1: Distribution of firm by Subsidy Recipient
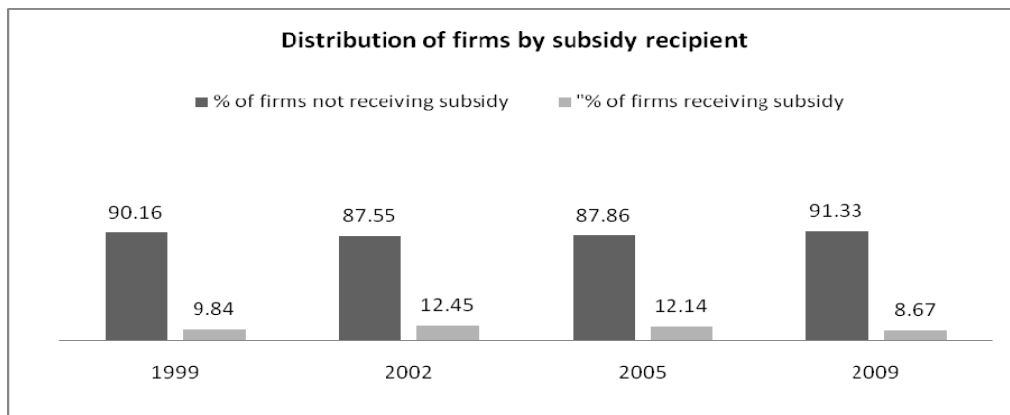
Note: In the survey the question asked to the firms was-"Did your firms receive any kind of subsidy during the last three years". All kind of subsidy is considered in this diagram.

Figure2: Distribution of Firm Ownership by Subsidy
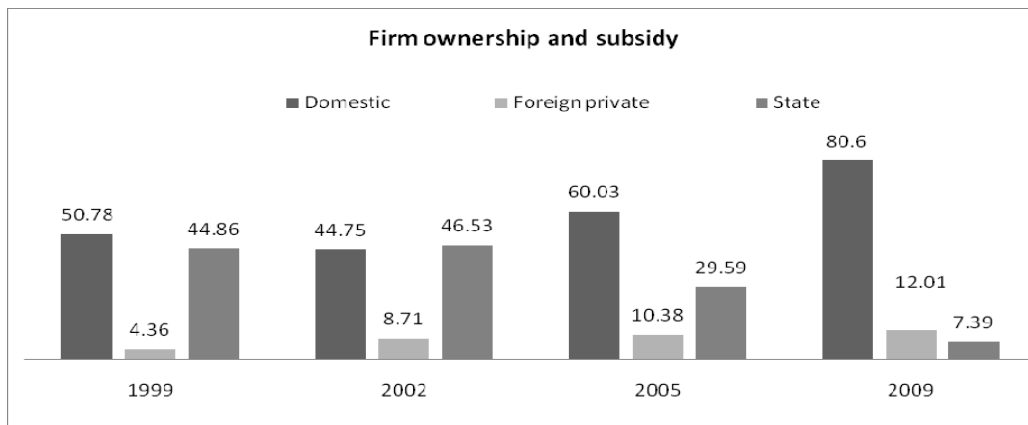
Note: If at least 25% of the share is owned by foreign owner then the firm is considered as Foreign private. Also during this period of time a number of state enterprises were privatized and

kept receiving subsidy. So it might cause the dramatic decrease of the state owned firms (receiving subsidy) percentage from 2005 to 2009.

Table 3: Categorical distribution of firms according to industry they belong to and industry wise receiving subsidy

Industry category		
	Percent	Share in receiving subsidy
Mining	2.01	2.97
Construction	9.80	8.19
manufacturing	35.98	41.89
Transport/communication	6.26	9.30
Trade	29.43	16.14
Business services	6.00	6.69
Hotels/restaurants	5.10	3.88
Other service	5.43	10.96
Total	100	100

Note: Industry category shows in which industry category the firm fall in. For year 2009 the Industry code was used.

Table 4: Distribution of export and non export oriented firms with or without receiving subsidies

Subsidy	Number of firms that	Number of firms that	
	do not export	Exports	Total
Number of firms that	16,651	5,440	22,091
did not received subsidy	(75.37%)	(24.63%)	100
Number of firms that	1,464	1,064	2,528
received subsidy	(57.91%)	(42.09%)	100

Note: *The percentage of each category in shown are in parenthesis. Firm selling 100% domestically is considered as non exporting firm.*

Table 5: Regression Estimations of Probability of Receiving Subsidy

	(1)	(2)
VARIABLES	LPM	dprobit
Subsidy is the dependent variable		
Sales growth rate	0.0000461	.0000543
	(0.000108)	(.000091)
Employment growth rate	-0.00413	-0.00392
	(0.00317)	(0.00337)
Fixed asset growth rate	0.000335***	0.000255***
	(0.000120)	(7.88e-05)
Export	0.0270***	0.0233***
	(0.00903)	(0.00701)

Foreign firms	-0.0283***	-0.0200***
	(0.00981)	(0.00751)
State owned firms	0.198***	0.164***
	(0.0148)	(0.0158)
Construction	-0.0169	-0.0212
	(0.0343)	(0.0186)
Manufacturing	0.000719	-0.0138
	(0.0335)	(0.0211)
Transportation/Communication	0.0197	-0.00549
	(0.0359)	(0.0220)
trade	-0.0279	-0.0458***
	(0.0335)	(0.0171)
Business services	0.0199	-0.00364
	(0.0348)	(0.0225)
Hotels/ Restaurants	-0.0117	-0.0258
	(0.0351)	(0.0180)
Others	0.0857**	0.0417
	(0.0367)	(0.0329)
Large firm	0.120***	0.112***
	(0.0140)	(0.0145)
Medium firm	0.0720***	0.0666***
	(0.00964)	(0.00949)
Country fixed effect	Yes	Yes
Year fixed effect	Yes	Yes
Constant	0.0670	
	(0.0413)	
Observations	8,911	8,911
R-squared	0.223	
Sales growth rate	0.0000461	.0000543
	(0.000108)	(.000091)
Employment growth rate	-0.00413	-0.00392
	(0.00317)	(0.00337)
Fixed asset growth rate	0.000335***	0.000255***
	(0.000120)	(7.88e-05)
Export	0.0270***	0.0233***

Note: *Robust standard errors in parentheses   *** p<0.01, ** p<0.05, * p<0.1. Country and Year dummy variables are included in the regression analysis but none of them are statistically significant. Column (2) shows the marginal effects calculated at the mean value of each explanatory variable. Each of the estimates shows the change in probability for an infinitesimal change in each independent, continuous variable and by default reports the discrete change in the probability for the dependent variable. Standard residuals were estimated and if absolute value is higher than 3 then the observations are considered as outlier and dropped from the estimation. Subsidy is the dependent variable here which takes binary values 0 and 1. 0 shows the firm did not received subsidy and 1 stands for firms which received subsidy.*