

Through the Looking Glass: Are Perceptions Real?¹

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Introduction

It might be considered a little heterodox to view an object outside the exclusive lens of the market. A farmer's ties to the soil, however, run deeper with an inexhaustible source of cultural veins. For the sake of sullen homogeneity, land procurement has an underlying monetary base attached to it. Expected payoffs and the plethora of literature tracing the paths of beliefs from the prior to the posterior seem to ignore certain irregularities along the way. In this paper, we intend to find a relationship between the way people interact with a range of direct and indirect experiences. Thereafter, we suggest some plausible ways as to how these relationships come about. We seek to highlight the factors that play a significant role in determining whether a particular case of land acquisition would occur smoothly or not. Compensation offered and the efficacy through which it is transferred, do play pivotal roles. In this project, though, we intend to verify whether the nature of the project for which land is being acquired and people's perceptions about the same play a significant part in the acquisition of land.

In the year 2006, Jhajjar district of Haryana witnessed procurement of land for two different projects, namely, the Kundli-Manesar-Palwal (KMP) Expressway and the Reliance SEZ. While the former was built solely by the Haryana State Infrastructural Industrial Development Corporation (HSIIDC), the latter was being jointly developed by Reliance Ventures, a subsidiary of Reliance Industries and the HSIIDC. Apart from the fact that the entities involved in the construction of the project were different, the method of procurement of land was also contrasting. For the KMP, land was acquired by HSIIDC under the Land Acquisition Act, 1894 with certain amendments that the Haryana government made to the Act. For the SEZ, Reliance sought to buy land from farmers at certain specified rates.

The projects met dissimilar fates as regards the procurement of land. While land for the KMP was acquired with relative ease and no major protests, Reliance's offer (which was earlier greeted by open arms by some villagers) was shunned by the villagers. Given below is a description of the projects and the methods involved for the procurement of land.

Kundli-Manesar-Palwal Expressway

Also popularly known as the Delhi Western Peripheral Expressway, the KMP is a 135.6 km long expressway being constructed in Haryana. Besides connecting the triangle of Kundli, Manesar and Palwal, this road sought to act as a Delhi bypass for traffic coming from the north of Delhi on NH1 and going to the south of Delhi. The project was conceptualised in the year 2004. It was only in 2006, however, that acquisition of land for the construction of the road was undertaken. The land for the construction of the road was acquired under the Land Acquisition Act of 1894. Though this road extends across a large part of Haryana, we focussed on the district of Jhajjar because this district involved the intersection with the Reliance SEZ. This eased the path for comparison between these two projects because of social and administrative homogeneity. The compensation package offered to the people involved a sum of Rs. 18 lakhs per acre. Along with this, there was an annuity of Rs. 15,000 per year per acre with an increment of Rs. 500 per month. While we were informed at the

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office of the Chief Engineer, HSIIDC at Panchkula, that the acquisition of land occurred the Urgency Clause of the Land Acquisition Act, we received a contradictory response from the people affected in the villages. In the backdrop of no protests and a supposed smooth acquisition of land, there seemed to be a multitude of forces at play. Very broadly, there seemed to be discontent in parting with one's land. In the presence of government action, however, people gave up their land reluctantly. The degree to which people's decision to give their land was influenced by acceding to the government's will and a degree of helplessness to differ with it. In addition, there factors like people perceiving the road to be a source of public utility could have also played a role.

The Special Economic Zone, Jhajjar

On the lines of the Special Economic Zones Act, 2005, the Government of Haryana passed the Haryana Special Economic Zones Act. In accordance with the state's new industrial policy of venturing into the fields of public private partnerships to give an impetus to infrastructure, it was announced that the country's largest multiproduct SEZ was to be set up in Jhajjar. Spanning an area of 25,000 acres between Gurgaon and Jhajjar, the project toed the line of controversy within a year of the central act and less than 6 months of the enactment of the state legislation, Haryana seemed poised to set up the SEZ. Reliance bought about 7000 acres of land through direct negotiations with farmers and 1383 acres through the HSIIDC. However, there were large tracts of land contingent to these 8000 acres where farmers were unwilling to give up their land. Because of the slow rate of land procurement and discontinuity in land bought, the SEZ project was abandoned altogether in January, 2012.

The paradoxical aspect of this project was there was greater problem in buying land than it was for the government to acquire it. In Jhajjar, there was no acquisition and Reliance sought to buy land from farmers at the rate of Rs. 22 lakhs per acre. In addition to this, we were informed by the people in the villages about a lucrative package of benefits that were promised to the people who sold off their land. Among them were an annuity of Rs. 30,000 per acre per year with an increment of Rs. 1000 per acre per year for a period of 33 years, the initiation of an ITI, employment in the units that would be under the purview of the SEZ and the provision of medical facilities in the form of a dispensary. Much to the dismay of the villagers, though, almost all of the promises were not met. As regards the annuity, people said that only if one sold the entire plot that one possessed, would one get the annuity. Prior to the transactions, however, the villagers stated that they were led into believing that they would be given an annuity irrespective of the proportion sold. In the contract, however, it was clearly stated that this would not be the case. In the absence of relying on any substantive legal assistance, the villagers sold off their land believing that they would get the annuity and the other benefits. In the face of the actuality of the situation, people were infuriated. This resulted in a large scale cessation of selling of land. Consequent upon Reliance buying the entire, continuous tract of land that they had envisioned for the SEZ, was the benefit of the locals getting employment opportunities in the units in the SEZ. Due to the preclusion of any sort of transactions, there could not be a fruitful initiation of any units in the SEZ and hence it resulted in no employment benefits for the villagers. This was a vastly different result from what the villagers had imagined.

To discern why one project failed and the other did not, the reasons could not be simply reduced to an inadequate incentive generating scheme as Reliance continued to offer compensation packages that were more lucrative. In this paper, we proceed in two steps. The first is to recognise a relationship between the assent to give up land and socioeconomic characteristics of households. Along with this, the former's relationship, if any, is sought to be verified with characteristics other than socioeconomic characteristics. These may be reduced to two streams. One is the perceptions that people hold about

the entities involved in the process of procurement of land for a given project while the other is the perceptions people hold about the nature of the project itself. This motive always runs the risk of running into triviality with a teeming source of belief updating literature available. The significance of this exercise, however, is magnified if we do not shy away from ascertaining the reasons for the particular type of belief change. We propose some plausible reasons for this belief change in the concluding section.

Theoretical framework

In their paper on the land acquisition case in Singur, Maitreesh Ghatak et.al delineated some important aspects in the preferences people seek in compensation packages. Taking cues from this paper and assessing the field from surveys, we came up with a list of the factors that could be reliable indicators for the socioeconomic statuses. Some of these included yearly incomes, landholdings, educational statuses of the household members, dependency ratio, proportion of area irrigated and the method of irrigation, money spent on fertiliser in a year, the status of the house (*kaccha/pakka*), sanitation facilities, visits to the hospital and others.

Since the prospect of a person losing or selling his/her land for a project of 'public utility' does not occur in isolation, it would be grievously wrong to treat social networks as being insignificant to how reluctant a person might be in giving up the land. Insofar as both these projects were concerned, we started from the almost hallowed assumption of a common prior information set. When the two parties came to the fore to acquire land, the compensation packages and the terms of agreement were supposedly common knowledge. Thereafter, the intricacies of the processes were freely available, as well. The social fabric of the village prevents anybody from selling off land without the others knowing. Also, selling off land was hardly an individual household decision. Counselling by fellow villagers provided an impetus to people who became cogs in a huge wheel of distress selling. As far as the acquisition goes, there was a feeling of camaraderie that sought to sympathise with everyone whose land was acquired. Hence the people affected are ever visible. Given this common information set, we sought to trace the path of the change in perceptions of the people over the course of these two projects. With the risk of repetition, it has to be pointed out again that there is no stroke of novelty in this regard. After the procurement of land for both the projects was fully underway and in the course of the doling out compensation, people's information set expanded to take into account the following: the people whose land had been acquired by the government received the promised compensation while the people who sold off their land to Reliance seem to have been hard done by. This information was shared by all and there was no way of preventing this either. The *baithaks* of a village are hotspots for all issues pertaining to that village. They are the channels through which information is universalised in the village. Putting things into perspective, it might be a tad obvious to imagine that selling off land to Reliance was considered a risky bet by more than a few people. There might be other factors, however, that could have had a role in people being more reluctant to give up their land to Reliance. One could be the differing nature of the projects themselves. The land acquired for the KMP was acquired in a linear fashion since it was a road while land for the SEZ was not dispersed in that sense. It might not be totally unreasonable to expect that this could have had an effect on the bargaining power of the people concerned, that is, even though people were exposed to the same information, people could have developed a stronger notion of how Reliance had affected the people because of a tighter circler of social networking.

To clearly delineate the role of perceptions in the process of decision making, it is suitable to split the process itself into two steps. One step is that of people deciding on their socioeconomic characteristics to decide whether to sell the land in the first place. The other step is to decide which entity to choose while if they are indeed willing to give up their land. Perceptions play the pivotal role in this step. It is important to note here that these two steps may not always occur sequentially. The order in which they occur is determined by the socioeconomic characteristics themselves. They may or may not be opposing in the direction of their action, too. To segregate the effects of these two, however, is difficult. Socioeconomic characteristics can shape the way perceptions are formed.

Sampling

Sampling Procedure

The study is based on a survey of 96 households across 8 villages. The villages covered were Badli, Lagarpur, Daryapur, Daboda Khurd, Bhupaniya, Pelpa, Ladpur and Sondhi. Amongst these villages Badli, Lagarpur and Daryapur there was both, acquisition of land for the KMP expressway and buying/selling of land for the Reliance SEZ. Dabodi Khurd and Bhupaniya saw only acquisition of land for the KMP while in Pelpa, Ladpur and Sondhi, land was bought by Reliance but there was no acquisition for the KMP. To ascertain the different ways in which people were affected by these two projects, directly or otherwise, we decided to not categorise people merely on the basis of contrasting income or education levels. As the perceptions people hold about these projects is innately related to how people assessed the process involved and the outcome achieved thereof, people were grouped on the basis of how they were involved in the project themselves. For the areas where both the SEZ and the KMP had affected people, there are four categories of people. These are:

1. People whose land was acquired for KMP and who sold off some land to Reliance
2. People whose land was acquired for KMP and they did not sell off their land to Reliance
3. People whose land was not acquired for KMP and they sold off their land to Reliance
4. People whose land was neither acquired for KMP nor did they sell it off to Reliance.

Places where land was bought by Reliance and there was no acquisition of land for the KMP was divided into two categories:

5. People who sold off their land to Reliance
6. People who did not sell off their land to Reliance

Places where land was acquired for the KMP but there was no buying of land by Reliance was divided into two categories:

7. People whose land was acquired
8. People whose land was not acquired

Though these categories represent people on the basis of the experience they had with the two projects, it is important to note that this experience was not entirely exclusive to each category. For instance, people who sold off their land to Reliance in the areas where only Reliance came for the buying of land had a similar experience as compared to people who sold off their land to Reliance in the areas where there was both acquisition of land for the KMP and buying of land for the SEZ. Their

perceptions, in turn, affected those people whose land was acquired for the KMP. This points towards a very interactive process wherein we cannot narrow down a particular category's perceptions about the entities or the projects to be unique. Hence we decided to attach equal weights to all of them, that is, 12 people in each category.

Because we were unable to get the lists of the people affected by the two projects from the office of the Chief Engineer, HSIIDC, at Panchkula, we decided to form lists of the people we were supposed to be contacting from the villages themselves. We referred to stratified sampling as the population of each village we visited was at the minimum of 4000 individuals. To avoid the risk of running into a similar set of households (in terms of land holdings, educational status, socio-economic indicators that *might* affect the families) we adopted the following method: In the first instance of entering any village we contacted the village *sarpanch* for a tentative list of people who had sold their land to Reliance or whose land was acquired by the government for the construction of the KMP. With this list in hand, another list was sought to be prepared by way of visits to the village *baithaks*. The large farmers were few and well known in the village. Hence, their names were generally talked about if they were involved in either of the transactions. At the end of this we arrived at list of about 10 names from each village. Through this, we prepared lists of people with ample variability and appropriate inclusion of large, medium and small land holding farmers. This prevented the distortion of results that could have risen because of homogeneity in the socioeconomic characteristics.

In each village we visited people either at the *baithaks* or at their residences. We went forth with a questionnaire that aimed to capture some socioeconomic characteristics and their perceptions about the two projects concerned. The questionnaire comprised three sections. The first section was common for people of all categories. It focussed on the socioeconomic characteristics of the households. Questions asked pertained to aspects like educational statuses, dependency ratio, kind of house (*kaccha/pakka*), sanitation facilities, fertility of land, area under irrigation, mode of irrigation, the quality of available water, expenses on fertiliser and present market rates of land.

The second section was exclusively for people whose land was acquired by the government for the construction of the KMP. Hence, this section was addressed to people belonging to Categories 1, 2, and 7 (as defined above). In this section, we sought to find out the amount of land acquired, compensation offered, their willingness to give up their land, market rate of land at the time of the acquisition, their knowledge about the Urgency Clause of the Land Acquisition Act, 1894 and the No Litigation Agreement, provision for moving court for an increase in compensation and the description of protests against the acquisition, if any. Also, people were asked about their willingness to give up their land to Reliance if they were offered the same compensation package.

The sole addressees of the third section were people who sold off their land to Reliance for the SEZ. This section was addressed to people belonging to Categories 1, 3 and 5. Questions on the process of selling of land mirrored those of the second section. However, additional questions were asked about the benefits (including employment opportunities, medical facilities and educational initiatives) that were promised.

Besides these three sections, a set of questions was asked to everyone. The purpose of these questions was to capture the effect of perceptions, if any, on the decisions of households in preferring a particular entity while giving up their land. People were asked as to which entity they would prefer if they were offered the present market rate and if they would change their preferences if they were offered a higher rate by the other entity. At the end, people were asked if they preferred the KMP over the SEZ given the fact that the entity they preferred executed the project.

Sample Characteristics

As regards the type of house, the sanitation facilities and the visits to the local hospital, area under irrigation and the mode thereof were mainly homogeneous. The average landholding is 5.65 acres with a standard deviation of 6.93. For measuring the educational status of households, we calculated the number of people who had studied till Class X at least. The average number per household for this was 2.91 with a standard deviation of 1.75. For the dependency ratio, we earmarked three categories, that is, less than half, between half and one and more than one. Out of the 96 households surveyed, 53 belonged to the first category, 31 to the second and 12 to the third. In a more in-depth analysis of the data we find a rather intuitive argument that there is positive correlation between the land holdings and education

Analysis

Out of the 96 households that were surveyed, 72 had the opportunity to sell off their land to Reliance in 2005-06. 50 percent of these ended up selling their land. To gauge as to how willing people were to sell off their land to Reliance presently, we asked them to make a choice between the government and Reliance at the present market rate. To do away with possible apprehensions about the nature of the project itself, we asked them to make this choice irrespective of the project. Only 11 percent of the people preferred Reliance to the government in such a scenario, 48 percent preferred the government while 41 percent were unwilling to give it to either. One plausible explanation for this is the fact that on average the size of landholdings had diminished over this period because our sample had 84 households who had either sold off their land to Reliance or whose land had been acquired by the government or both. Since, one expects the relationship between the willingness to sell off one's land and the size of landholdings to be positive, intuitively, it is reasonable to expect that there would be a decline in the willingness to part with one's land. But, it is interesting to observe that this decrease in willingness to sell off land is coupled with an increased aversion for Reliance. To explain this one needs to look further than the compensation offered, *prima facie*. It seems appropriate to believe that people did not overlook the experiences of people who sold off their land to Reliance. Because most people in the villages surveyed, believed that Reliance had backed out on their promises, they stand convinced that it is a safer bet to give the land to the government. The assurance of regular annuity payments seems to have outweighed the lure of job security and the plethora of benefits promised by Reliance.

Table 1 below, shows the responses of people with varied categories of land. For Category I, we would expect people not be willing to sell off their land because of financial constraints and an absolute dearth of sources of alternatives. The decision of 'neither' is unambiguously the largest vote gatherer in this category. For people who are willing to sell off their land, government is the preferred option. Herein, perceptions about the two entities seem to be playing a role, that is, government is the safer bet. Overall, though, the economic constraints seem to be overriding the effects of perceptions for this category.

For Category II, the choice of government is the most preferred option. Here, majority of the people are willing to sell off their land, thereby showing that people are not as risk averse to selling of land as compared to Category I. But their landholding size is precariously placed between those of Categories I and III. So, the decision of selling of land has to be taken with due considerations of potential losses.

Hence, going on the line of reason of the government being perceived as being more trustworthy than Reliance, people choose the government.

Table 1

<i>Decision/Categories</i>	Category I (Less than or equal to 2 acres of land)	Category II (Between 2 and 5 acres of land)	Category III (Between 5 and 10 acres of land)	Category IV (More than 10 acres of land)	Total
Government	11	16	13	6	46
Neither	18	14	5	3	40
Reliance	4	3	2	1	10
Total	33	33	20	10	96

In Category III, 75 percent of the people are willing to part with their land. In this category, the choice of government is a clear favourite with 13 out of the 20 people opting for it. Again, because of the increase in the landholding size people are more willing to give up their land. However, the area under Category III, too, is not immense by any stretch of imagination. So, people would want to remain under the umbrella of the safety that they perceive the government provides.

Category IV is the group of people with the largest size of the landholdings. This factor of having an immense amount of land has two distinct opposing forces at play. One is that people would be willing to sell off their land without compromising on their financial security. This would cause them to give up their land more easily hence reducing the number of 'neither' in this category. The other force, however, could be one of people trying to maintain the existing level of wealth and abstaining from selling off their land. Hence, the drop in the choice of 'neither' is not a huge one. Given this, one might expect people who are willing to sell off their land to be relatively indifferent between the government and Reliance. However, the choice for government clearly outweighs that for Reliance. On analysing the 6 people who opt for government, it was seen that 3 of them belonged to areas where Reliance had approached people for buying of land. So, it is quite likely that their choices would have been influenced by the sequence of events that followed in those areas. Two persons were from areas where there was acquisition by the government alone and Reliance did not approach people for buying of land. These people could have only relied upon the experience that their fellow villagers had been subject to during the acquisition of land and the compensation received from it. Apart from this, the story of Reliance being a renegade is ubiquitous in these areas. These forces seem forcible enough to lead people into concluding that the government is indeed a better option. The remaining one person was from an area where both Reliance and the government had come for procurement of land. Needless to say, the forces cited above would have only amplified in his case. Hence, government seems to be the only *rational choice* in this case.

To put things in perspective, it is important to note the following: people with low landholdings do not have the luxury to take decisions contingent on perceptions. The economic constraints seem to hold back any room for that. From the decreasing number of the choice 'neither' across the various categories, it is easy to discern that with an increase in economic freedom, people are more willing to give up their land. Besides, there is an increase in the influence that perceptions have in people's decisions as we move across the categories.

Econometric analysis:

For an in depth analysis of the factors affecting the decision of the government, we set up a multinomial logit regression model. The dependent variable has three categories: a) choice of government, b) that of reliance and c) neither of the two parties. There are 3 specifications for the abovementioned model. For the first specification the independent variables were as follows:

1. Landholdings
2. Educational Status
3. Dummy variables for Group Categories
4. Dummy variables for Dependency Ratio (Three Categories: Category 1: Less than half ; Category 2: Between half and one ; Category 3: More than one)

For the second specification, we dropped the explanatory variable of Educational Status because there was a strong correlation between Landholdings and Educational Status.

For the third specification, the independent variables were as follows:

1. Dummy variables for landholdings (Four Categories: Category I : Less than or equal to 2 acres ; Category II : Between 2 and 5 acres ; Category III: Between 5 and 10 acres ; Category IV: More than 10 acres)
2. Dummy variables for the Group Categories
3. Dummy variables for Dependency Ratio

The first specification fit is poor with pseudo R squared equal to 0.2774. Landholdings and education are not significant in both the categories of government and Reliance, given that neither is the base category. The two explanatory variables which are significant are Group 5 (people who sold off their land to Reliance in areas where only Reliance approached people) and Category 3 of Dependency Ratio (greater than one) for government alone compared to the base category. When there is a unit increase in Group 5, the probability of choosing government increases by more almost four times relative to the base category. When there is a unit increase in Category 3 of Dependency Ratio, the probability of choosing government decreases three fold relative to the base category. In the case of Reliance, the only variable that turns out to be significant is Group 3 which is people whose land was not acquired for the KMP but was sold off to Reliance. The result is slightly surprising with an increase in the probability of choosing Reliance relative to the base category with a unit increase in Group 3.

The second specification results mirror those of the first one. This shows that dropping the variable of Educational Status does not really affect the results by a significant amount.

In the third specification, all the dummy variables for landholdings become significant in the case of government. These results are similar to the analysis of Table 1. In the case of Reliance, the landholdings continue to remain statistically insignificant. The other variables show similar results to those of specifications 1 and 2.

A note of caution, however, is that this regression analysis prevents us to say anything substantial about the role of perceptions, landholdings or the other explanatory variables. This might be because of the small sample size amongst other possible reasons.

Conclusion

From the preceding discussion, it can be easily discerned that the perceptions about the two entities played a decisive role in the decision formation of the people. As mentioned earlier, this exercise toed the line of triviality throughout. What is important to note, however, is the fact that belief updating can always be beclouded with seemingly obvious facts that purport to tell the truth but are furthest away from it. An inherently striking feature that most expected payoff arguments seem to overlook is the basic truth through which these expectations themselves shape. It is important to not let the paths be beguiled by consequentiality itself. Thus far, we only talked about the how the expectations changed. It would be gravely wrong if we did not focus enough on the reasons as to why they changed the way they did. There are three possible explanations as to why these particular paths were charted out for the expectations. One could be the reason that Reliance failed to live up to the hopes of the villagers. From what we gathered on the field, people were vehemently convinced about how the advent of Reliance was a forged dream. The other reason could be that a significant amount of people were convinced about how the government would in the very least be benevolent enough. It is surprising to think that only in the face of an absolute betrayal did people get convinced about the 'sticky' welfarism of the government. Whether that is desirable or not, is a question that needs to be looked into, itself. Lastly, and perhaps even more sinisterly, there was an overwhelming sense of helplessness when people talked about the government acquiring land. Most people in the villages that were surveyed considered the government's will to be supreme, almost beyond an individual notion of right and wrong. The purpose of this paper is not so much in pointing towards a sanguine picture of people preferring the government than it is towards pointing as to how a trampling of freedom wears contrasting garbs.

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*Appendix**Specification 1*

Multinomial logit regression

Dependent variable: 3 categories (Government, Reliance, Neither) named as ‘target’

Independent variable: Landholdings, Educational Status, Dummy Variables for Dependency Ratio, Dummy Variables for the Eight Categories

The results are as under:

```
. mlogit target LandHoldings Education i.newgroup i.depend, base(1)
```

```
Iteration 0: log likelihood = -91.478893
Iteration 1: log likelihood = -72.372259
Iteration 2: log likelihood = -67.080339
Iteration 3: log likelihood = -66.268878
Iteration 4: log likelihood = -66.139003
Iteration 5: log likelihood = -66.108981
Iteration 6: log likelihood = -66.101626
Iteration 7: log likelihood = -66.100188
Iteration 8: log likelihood = -66.099951
Iteration 9: log likelihood = -66.099895
Iteration 10: log likelihood = -66.099882
Iteration 11: log likelihood = -66.09988
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Multinomial logistic regression                Number of obs   =          96
                                                LR chi2(22)    =          50.76
                                                Prob > chi2    =          0.0005
Log likelihood = -66.09988                    Pseudo R2      =          0.2774
```

target	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
1	(base outcome)					
2						
LandHoldings	.0737411	.0564396	1.31	0.191	-.0368785	.1843608
Education	.2116098	.1561154	1.36	0.175	-.0943706	.5175903
newgroup						
2	-.0610888	.9637515	-0.06	0.949	-1.950007	1.827829
3	.8898004	1.047068	0.85	0.395	-1.162416	2.942017
4	.312572	.9318747	0.34	0.737	-1.513869	2.139013
5	3.874559	1.525821	2.54	0.011	.8840045	6.865114
6	-.2714368	.930616	-0.29	0.771	-2.095411	1.552537
7	1.534014	1.107511	1.39	0.166	-.6366677	3.704695
8	.3950442	.9419534	0.42	0.675	-1.45115	2.241239
depend						
2	-.0935122	.6023831	-0.16	0.877	-1.274161	1.087137
3	-3.019592	1.331059	-2.27	0.023	-5.628419	-.4107648
_cons	-1.208026	.9340721	-1.29	0.196	-3.038773	.6227219
3						
LandHoldings	.1018702	.0952505	1.07	0.285	-.0848173	.2885576
Education	.1093547	.3056507	0.36	0.721	-.4897096	.708419
newgroup						
2	-16.23419	2288.704	-0.01	0.994	-4502.012	4469.544
3	2.549791	1.40349	1.82	0.069	-.2009977	5.30058
4	.1647158	1.616338	0.10	0.919	-3.003248	3.332679
5	2.132292	1.990153	1.07	0.284	-1.768335	6.03292
6	-16.04197	2184.739	-0.01	0.994	-4298.052	4265.968
7	1.563684	1.539056	1.02	0.310	-1.45281	4.580179
8	-15.163	2048.871	-0.01	0.994	-4030.877	4000.551
depend						
2	-1.690372	1.321667	-1.28	0.201	-4.280792	.9000472
3	.3247752	1.148209	0.28	0.777	-1.925673	2.575223
_cons	-2.41929	1.567002	-1.54	0.123	-5.490558	.6519779

Specification 2

Multinomial logit regression

Dependent variable: 3 categories (Government, Reliance, Neither) named as 'target'

Independent variable: Landholdings, Dummy Variables for Dependency Ratio, Dummy Variables for the Eight Categories

The results are as under:

```
. mlogit target LandHoldings i.newgroup i.depend, base(1)
```

```
Iteration 0: log likelihood = -91.478893
Iteration 1: log likelihood = -73.17428
Iteration 2: log likelihood = -68.00761
Iteration 3: log likelihood = -67.228624
Iteration 4: log likelihood = -67.101124
Iteration 5: log likelihood = -67.071261
Iteration 6: log likelihood = -67.06422
Iteration 7: log likelihood = -67.062785
Iteration 8: log likelihood = -67.062552
Iteration 9: log likelihood = -67.062496
Iteration 10: log likelihood = -67.062484
Iteration 11: log likelihood = -67.062482
```

```
Multinomial logistic regression      Number of obs   =      96
                                      LR chi2(20)      =      48.83
                                      Prob > chi2      =      0.0003
Log likelihood = -67.062482          Pseudo R2       =      0.2669
```

target	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
1	(base outcome)					
2						
LandHoldings	.0841399	.0543511	1.55	0.122	-.0223863	.1906662
newgroup						
2	-.0746881	.9491891	-0.08	0.937	-1.935065	1.785688
3	.7203184	1.024354	0.70	0.482	-1.287378	2.728015
4	.2752727	.9160203	0.30	0.764	-1.520094	2.070639
5	3.629544	1.475497	2.46	0.014	.7376236	6.521464
6	-.3385556	.9248907	-0.37	0.714	-2.151308	1.474197
7	1.31451	1.076025	1.22	0.222	-.7944612	3.423481
8	.372484	.9243806	0.40	0.687	-1.439269	2.184237
depend						
2	-.1436138	.5957782	-0.24	0.810	-1.311318	1.02409
3	-3.121743	1.347966	-2.32	0.021	-5.763709	-.4797783
_cons	-.5585647	.7779777	-0.72	0.473	-2.083373	.9662437
3						
LandHoldings	.1041585	.0931507	1.12	0.263	-.0784136	.2867306
newgroup						
2	-16.25083	2280.108	-0.01	0.994	-4485.18	4452.678
3	2.447373	1.380722	1.77	0.076	-.2587922	5.153538
4	.1260811	1.593958	0.08	0.937	-2.998019	3.250182
5	1.980443	1.945587	1.02	0.309	-1.832837	5.793723
6	-16.07644	2197.654	-0.01	0.994	-4323.399	4291.246
7	1.417856	1.531632	0.93	0.355	-1.584088	4.419801
8	-15.15091	2048.877	-0.01	0.994	-4030.876	4000.574
depend						
2	-1.768303	1.321546	-1.34	0.181	-4.358485	.8218793
3	.2715522	1.14342	0.24	0.812	-1.96951	2.512614
_cons	-2.052773	1.331356	-1.54	0.123	-4.662182	.5566371

Specification 3

Multinomial logit regression

Dependent variable: 3 categories (Government, Reliance, Neither) named as 'target'

Independent variable: Dummy variable for Landholdings named as 'x', Dummy Variables for Dependency Ratio, Dummy Variables for the Eight Categories

The results are under:

```
. mlogit target i.x i.newgroup i.depend, base(1)
```

```
Iteration 0: log likelihood = -91.478893
Iteration 1: log likelihood = -70.794437
Iteration 2: log likelihood = -65.553427
Iteration 3: log likelihood = -64.495238
Iteration 4: log likelihood = -64.332861
Iteration 5: log likelihood = -64.305558
Iteration 6: log likelihood = -64.299223
Iteration 7: log likelihood = -64.297668
Iteration 8: log likelihood = -64.297358
Iteration 9: log likelihood = -64.297291
Iteration 10: log likelihood = -64.297276
Iteration 11: log likelihood = -64.297272
```

```
Multinomial logistic regression      Number of obs   =      96
                                      LR chi2(24)      =      54.36
                                      Prob > chi2      =      0.0004
Log likelihood = -64.297272          Pseudo R2       =      0.2971
```

target	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
1	(base outcome)					
2						
x						
2	1.23846	.7133048	1.74	0.083	-.1595921	2.636511
3	1.961023	.8184176	2.40	0.017	.3569542	3.565092
4	1.742148	1.054822	1.65	0.099	-.3252649	3.809562
newgroup						
2	-.2312583	1.082217	-0.21	0.831	-2.352364	1.889847
3	.7496501	1.151247	0.65	0.515	-1.506753	3.006053
4	.2660037	.9505745	0.28	0.780	-1.597088	2.129095
5	4.077735	1.533511	2.66	0.008	1.072109	7.083361
6	-.1185007	.935803	-0.13	0.899	-1.952641	1.71564
7	1.350471	1.085858	1.24	0.214	-.7777711	3.478712
8	.2124721	.9527575	0.22	0.824	-1.654898	2.079843
depend						
2	-.0636077	.6161416	-0.10	0.918	-1.271223	1.144008
3	-2.882739	1.357823	-2.12	0.034	-5.544023	-.2214551
_cons	-1.235395	.9015982	-1.37	0.171	-3.002495	.531705
3						
x						
2	1.931725	1.43897	1.34	0.179	-.8886037	4.752054
3	1.837837	1.468657	1.25	0.211	-1.040679	4.716353
4	2.800727	2.108043	1.33	0.184	-1.330961	6.932416
newgroup						
2	-16.30516	1806.328	-0.01	0.993	-3556.644	3524.033
3	2.968166	1.591505	1.87	0.062	-.1511258	6.087458
4	.1063633	1.628637	0.07	0.948	-3.085707	3.298433
5	2.519386	2.086039	1.21	0.227	-1.569176	6.607948
6	-15.61181	1941.09	-0.01	0.994	-3820.079	3788.855
7	1.225482	1.594009	0.77	0.442	-1.898718	4.349682
8	-15.24482	1812.436	-0.01	0.993	-3567.553	3537.064
depend						
2	-1.682958	1.338317	-1.26	0.209	-4.306012	.9400959
3	.8080929	1.300755	0.62	0.534	-1.741339	3.357525
_cons	-3.056374	1.66668	-1.83	0.067	-6.323008	.2102589

```
.
```