Trust on Public Institutions and Informal sector

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ABSTRACT *The issue of Provision of property rights to informal sector is often discussed in favour of strengthening economic institutions through transformation of dead capital into active capital, a prerequisite for informal-formal integration and to bring more efficiency in the distribution of resources in a market based economy. This paper widely argues: how ill-defined and deficient government capacity to enforce laws and regulations have established informality as a rule and lead to emergence of huge informal sector in developing nations, and how the provision of property rights might lead to informal-formal integration to foster entrepreneurship and development in urban informal sector. This study utilizes primary data collected from Paan waalas of strength hundred from six zones of city of Mumbai and empirically examines these issues using multinomial ordered logit methodology. The evidences suggest that low trust on formal institutions (like, trust on legal system, administration) in general and police in particular, despite of having or not having property rights, is a major impediment for informal-formal integration. Thus, provision of well defined property rights to the informal sector could be favoured for upward income mobility and well-being.*

Introduction:

Property is entirely the creature of law.
Property and law are born together and must die together.
Before the laws there was no property; take away the laws, all property ceases.
Jeremy Bentham (1843)

Outside the Neo classical framework, all the markets carry varying degree of inefficiency as transaction cost of any exchange cannot be set to zero. In reality, our endeavor should be directed towards minimization of the cost through innovations in formal institutional arrangement to make exchange credible, which can foster trust at the market place. Well defined property rights with effective legal system could be the first step in this direction.

Urban informal markets are primarily regulated by relation-based governance as opposed to rule based governance. In a different context, Li (1999) offers an explanation based on differences in the costs of the two types of systems. Self-enforcing "relation-based" groups face rising marginal costs: members added at the margin are almost by definition less well connected, making it harder to communicate information with them and to ensure their participation in any punishments. Formal "rule-based governance" has high fixed costs of setting up the legal system and the information mechanism, but once these costs have been incurred, the marginal costs of dealing with strangers are low. Therefore, relation-based governance can be better for small groups, but rule-based governance will become better for large groups. This makes intuitive sense that both is desired and required for the efficient functioning of markets i.e. they should work in conjunction. But where Informal private punishment mechanism acts as a substitute for formal public punishment mechanism is an understandable query. The paper is divided into three sections: Section I produces the context of property rights and relation-based governance in urban informal sector, Section II deals with primary data and econometric models explain the determinants of trust in urban informal markets and section III concludes.

I

Hayek in Road to Serfdom (1944) states that the functioning of competition "depends, above all, on the existence of an appropriate legal system, a legal system designed both to preserve competition and to make it operate as beneficially as possible." Dreze and Sen (1998), Markets can hardly function in the absence of legal backing of contracts and particular rights. While some of these obligations are carried out automatically (and business ethics can play an important part in the fulfillment of contractual market exchanges), the possibility of legal action in the absence of such compliance is an important background condition for the smooth operation of systems of exchange and production Sen (2000) reminded that, "The efficiency of exchange could not work until contracts could be freely made and effectively enforced, through legal as well as behavioural reforms. Economic expansions are hard to plan without the needed trust in each other's plans and announcements and the required confidence that agreed arrangements can be relied upon."

De soto (2000) argues that, "the lack of legal property explains why citizens in developing and former communist nations cannot make profitable contracts with strangers, cannot get credit, insurance or utilities services: they have no property to lose. Because they have no property to lose, they are taken seriously as contracting parties only by their immediate family and neighbors. People with nothing to lose are trapped in the grubby basement of the pre-capitalist world." Thus market cannot operate smoothly without a system of legal relations i.e preserved property rights; obligatory contract which is verifiable before the rule of the law if required. In developing economies, most of the contracts are primarily informal and cannot be verified before the rule of law, in consequence, lack of legal backing and possibility of legal action relax on the margin. These economies are characterized by ill defined property rights, pervasive lawlessness, ubiquitous problem of information asymmetry which lead to frequent market failure and inefficient outcome, low trust in formal institutions and huge informal sector, business ethics or mutual trust play an important role or in reality appear as a substitute to carry out any transaction and informal punishment mechanism substitute the formal legal system in case of breach of contract. Thus, the lack of property rights forced the contracting parties to transact within a limited range of their interpersonal social network and trust is the only connecting thread among the contracting parties. Granovetter (1985) insists that formal institutions have limited ability to support exchange and thus social networks embodying informal institutions such as norms and trust play a crucial role. Macaulay's (1963) observes that "businessmen often prefer to rely on a 'a man's word' in a brief letter, a handshake, or 'common honesty and decency'—even when the transaction involves exposure to serious risks" (1963, p. 58). Thus, informal dealings have the advantage of promoting flexibility and responsiveness to changing conditions, avoiding costly renegotiation of contract clauses (Macneil, 1978). The advantages of such informal contracting mechanisms—commonly referred to as relational governance—are now extensively discussed. Relational governance supports cooperation through norms and reciprocal obligations that transcend initial contract clauses and economize on the costs to use the legal system (Dore, 1983). Williamson (1991, p. 271) stresses that "… each viable form of governance… is defined by a syndrome of attributes that bear a supporting relation to one another." Thus, there must be coordination between formal and informal institutions at market place. Informal institutions carry inertia property to change while formals are quite flexible and open for innovation and transformation. In this context role of the formal form or rule based governance becomes important as they can play pro-active role to build trust in exchanges with low transaction cost as against the sluggish behavior of informal institutions. In developing countries like India, where property rights are either absent or not well- defined in general exchanges mainly takes place through interpersonal social networks.

Interpersonal network respires on mutual trust i.e. trust should be honored within the network boundaries. As time moves, boundaries move horizontally, Networks expand; accordingly trust gets strengthened. To maintain trust is a challenging task as information network may disrupt with expansion. Thus, to sustain and fortify trust, two preconditions are required: First, after a certain extent, boundaries should be restricted so that somewhat closed network may perhaps be

able to make uniform flow of information possible and Second, some effective external enforcement (or, punishment) mechanism is required if somebody dares to breach the trust. These two prerequisites are mandatory to make trust *self-confirming.* Thus in developing economies, contacts are primarily informal and the necessary condition to begin any transaction is "Trust should be honored" and sufficient condition is contract enforcement and punishment bodies themselves should be trustworthy. Thus, trust is the foundation for any transaction to consummate. Dasgupta (2005) described this interpersonal network as social capital. Dasgupta (2009) reminds that social capital should be interpreted as interpersonal networks whose members develop and maintain trust in one another to keep their promises by the device of "mutual enforcement" of agreements. But trust is the key to cooperation; "social capital" when suitably applied, is only a means to creating trust. According to Putnam (1995, 67), "social capital refers to features of so-cial organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit." Thus formal institutions or rule based governance innovate themselves to build trust in informal institutions.

"Trust is the expectation that arises within a community of regular, honest, and cooperative behavior, based on commonly shared norms, on the part of other members of the community" Social capital is a capability that arises from the prevalence of trust in society or in certain parts of it.. . . [While] contract and self-interest are important sources of association, the most effective organizations are based on communities of shared ethical values. These communities do not require extensive contract and legal regulation of their relations because prior moral consensus gives members of the group a basis of mutual trust (Fukuyama, 1995).

Trust *encourages* socialization, which foster trust. It makes the first move in any commercial transaction, lubricates trade, builds confidence among investors, and nurtures a cooperative climate in the labour market. Thus, societies imbibed with high trust[17] develop faster. Societies equipped with well-built and effective formal legal institutions, where property rights are well defined, where cost of obeying the law under weighs the benefits can be considered as high trust societies. The reverse is true for low trust societies. A nation's well-being, as well as its ability to compete, is conditioned by a single, pervasive characteristic: the level of trust inherent in the society." (Fukuyama)

Knack and Keefer (1997), Zak and Knack, 2001) explore the impact of social capital on economic performance, and find that growth and investment are greater in countries with higher levels of interpersonal trust and characterized by greater civic cooperation. Ownership of social capital by households has a positive and significant effect on household per capita expenditure and/or incomes (Narayan and Pritchett, 1999). These findings indicate the persistence of endogeneity. I consider, trust as psychological insurance for commercial as well as social transactions. Trust brings two parties together to make a contract for further transactions. Contractual assurance required to carry forward any business transaction. Most of the contracts begin as well as end without any formal legal intervention and if dispute arises in between, solved informally. Formal settlement is the last resort. Prime reason for aversion of people from the formal legal system is huge transaction costs in terms of money, time and energy involved in it. This aversion gives birth to an alternative mode of governance which is extralegal, informal in nature *characterized by societal* nature of contracts, transactions, competitions; contract enforcement and even punishment (in case of cheating) characterize this sector. On the other hand, Portes (1994) argues that the more pervasive the enforcement of state rules and greater the penalties for violation, the more socially embedded informal transactions must be. He identifies it as a paradox of the informal economy. Lominitz (1988) labelled it "order creates disorder". Quietly, formality delivers informality.

According to World Bank's Doing Business report, 2009, India ranks 122 in ease of doing

[17] We consider trust here as trust among people and on formal legal system in a positive sense.

business, 121 in starting a business, 105 in registering property and 180 in enforcing contracts. Supreme Corurt of India's latest updates reveal that at the End of 2008, more than 30 million cases were pending with the different courts in India. In a database of 213 countries that measures the political, economic and the institutional aspects of governance, the World Bank report ranks India at half or below half on most indicators. India is also in the 56th percentile on the rule of law indicator. This is measured crime, kidnapping of foreigners, enforceability of private contracts, crime, tax evasion, black markets and variables like judicial independence. Given evidences discard Portes (1994), and Lominitz (1988) specification. Many developing and transition economies have dysfunctional legal systems, either because the laws do not exist or because the machinery for enforcing them is inadequate. In such countries, bilateral relationships, communal norms, trade associations, or market intermediaries may work in place of the formal legal system……these transition countries provide an informative place to examine the interaction between the formal legal system and private order mechanisms because both are in a state of flux (McMillan, J and Woodruff, C;2000).Dixit (2004) argues that, "deficiencies of the law are most acute in less-developed countries(LDCs) and in transition economies…of course economic activity does not grind to a halt because the government does not provide an adequate underpinning of the law. Too much potential value would go unrealized; therefore groups and societies have much to gain if they can create alternative institutions to provide the necessary economic governance. They attempt to develop, and sometimes succeed in developing such institutions of varying degree of effectiveness." De Soto (2000) adds, "The failure of the legal order to keep pace with the astonishing economic and social upheaval has forced the new migrants to invent extralegal substitutes for established law….the migrants in the developing world can deal only with people they know and trust (De Soto, 2000). Any business transaction begins with formal or informal contract with trust but the most essentiality of any contract is, that should be enforceable and punishment mechanism should be stringent to the extent that no one dares to cheat.

Grief (1993), Bernstein (2001), Richman (2006), Nkurunziza (2005), Mc Millan and Woodruff (1999) have revealed the presence and effective functioning of private legal system as a substitute of public legal system in their live case studies. In their studies, they explore that business transactions were based upon "reputation mechanism". Mutual trust and individual reputation are keys to initiate the transaction. Private information transmission mechanisms assure the principal that whether "the agent is honoring trust or not" and private legal system punished those who "breaches trust" or cheat.

Trust is a summary quantity that an agent has toward another based on a number of former encounters between them. Encounters are the repetitive games played between two or more individuals with reciprocity. This is how reputation built among the participants. Reputation is perception that an agent creates through past actions about its intentions and norms. With time, reputation concretes, not wither out. Reputation is a social quantity calculated based on actions by a given agent 'A' and observations made by others in an "embedded social network" that 'A' resides (Granovetter, 1985). A's reputation clearly affects the amount of trust that others have toward it. Conditioning future relations upon past conduct is the essence of the reputation mechanism. The eleventh century Mediterranean trade was plagued with *Information asymmetry,* a familiar problem of any economic transaction. Deficiency in formal legal system tempted agents to Cheating. The Maghribi traders programmed new rules of the game to triumph over these complex problems. Multilateral reputation mechanism, multilateral punishment, dual role (merchant as well as agent) of traders, well knitted information transmission mechanism were drafted as the rules of the game and this is how the eleventh century Maghribi traders reduced transaction costs and established an efficient trading system, as outcome of the game. The Coalition was shelled by the common religious-ethnic origin, served as a signal where information regarding past conduct could be obtained, while the commercial and social ties within the coalition served as a network for the transmission of information. Richman

(2002) explores that the community institutions i.e. the predominance of an ethnically homogeneous community of merchants, the norm of intergenerational family businesses, and a rejection of public courts in favor of private contract enforcement are the unusual feature of America's diamond industry. Bernstein (2001) in her studies on cotton industry in USA cites, "reputation is essential in this business. Millions of dollars of business will be done on the basis of a thirty-second phone call. Agreements are essentially oral……" The cotton industry has almost opted out of the pubic legal system, replacing with private commercial laws. Nkurunziza (2005), in his studies on Africa Shows that in the presence of reputation effects collateral is not a necessary condition for credit trade to take place. Due to potential residual information asymmetry between a bank and a borrower, the bank learns the type of borrower through repeated interaction, a process by which a buyer builds his reputation as an honest partner and a defaulting borrower forfeits his access to future loans.

However, in formal credit markets having such extensive information and monitoring would be too costly so information asymmetries are more acute. Urban informal markets are major component of nonfarm part of India's Informal economy, characterized by its capitalist nature, informality of its social relations (Breman, 1976) and regulated by many non state means of regulation (Harris-White, B., 2004). Nature of informal exchanges is such that it demands a high level of mutual trust and as Portes says, "The only way this can be created is through the existence of tight social networks"

All the above evidences call attention to the role of trust, reputation and social network in establishment of efficient trading mechanism if the market players are devoid of legal property rights.

Contract enforcement must be analyzed within the wider context of prevailing economic, social, cultural and political institutions (Grief, 1993). A society is dictated by institutions. North (Pg.3, 1990) conceptualizes, "institutions are rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction". Institutions can be formal (constitutional, property-rights rules, and contracts) as well as informal (norms, values, customs). Persistently, there is a clash between formal and informal institutions, as informal rules resist changing. A game with many rules and less strategy makes the game complicated, thus one should be very cautious while implementing the rules, even though that is feasible or viable. A game may results in to multiple equilibria which enhances complexities. Apart from these, to decide the rules of the game is itself challenging. Possibility of desirable outcome as an equilibrium depends on whether formal institutions are effective or not i.e. in other way, whether informal institutions responses are apt or not.

Social capital does facilitate informal contract enforcement – the logic of that derives from the basic theory of social capital that is game theory: if I have dense ties and networks of reciprocity with other people then I don't actually have to have a contract with my neighbor; both he and I are going to rake the leaves. We just do it without a contract and I don't sue him if he doesn't rake his leaves (Putnam, R.).Thus, Social capital and institutional enforcement might be in some sense alternative ways of providing social order when public order is either absent or functions ineffectively. The paper is divided in four sections including the above section, description about the data has been dealt in section II and presents the multinomial ordered logit methodology and its output, and section IV concludes the paper.

II

The data has been collected from 100 retail Paan shop owners in Mumbai on the basis of Gender, Caste, Category, Religion, Birth place, occupation, shop age, education, House and shop ownership, migration, various facets of social network, generalized and institutional trust, nature of competition in the market, earning, expenditure etc. Our data also provide a detailed description about the erosion of dominance of category, caste and immigrants from a specific

state in retail Paan Business in Mumbai and present an interesting case of popular entrepreneurship.

In this section, we will deal with models, in which the response or dependent variable is qualitative in nature. In these cases, choice set of the decision maker is limited, discrete and finite as well as conventional regression methods are inappropriate. These type of models are often called as "discrete choice models" or "qualitative response models" or "qualitative or limited dependent variable models". We will discuss here two models:

We have two categorical variables i.e. whether our responders', (i) "trust on legal system (tls)" and (ii) "trust on administration (ta)". Responses for all the above qualitative variables have been equated to four orders: "None at all" with 0, "Not very much" with 1, "Quite a lot" with 2 and "A great deal" with 3.

Model 1:

tls ~ area+ Shop_age + shop + house + year_edu + floor + tdt + dum_leg + bank)

Where, "area" is the different locations of Mumbai where data collection has been conducted. It captures the location effect of doing business.

"Shop_age" refers to the age of the shop i.e. since how many years the given shop has been at the same place. Generally, older the shop, larger will be the customer network; transaction volume will be more, more materials can be taken on credit for longer payment period and more trust can be accumulated over the years.

"Shop" variable informs us that whether our responders are owner of the shop (i.e do not pay rent) or run their business from rented shop. We equate own a shop" with 1 and run their business in rented shop with 0.

Variable "Year_edu" counts the year of education that our responders completed.

"tls", tp, tg and ta are four categorical variables, indicates the degree of trust of the responder towards the legal system, trust on police, trust on Government and trust on administration respectively and we have equated each to four orders: "None at all" with 0, "Not very much" with 1, "Quite a lot" with 2 and "A great deal" with 3. All these four variables individually are components of trust on formal institutions of governance.

"tdt" is total daily transaction of Paan shops in Rupees. It is general assumption that more the transaction, more will be the savings and as a result they people will be more inspired to buy their own house.

"nemp" is number of persons employed in the given Paan shop.

"help" is a dummy variable, refers to who has helped the Paan shop keeper in establishment of his business. If he has established his shop on their own (i.e. without anybody's help) =1, received help from prior migrants to the city (including friends, relatives and prior migrants of the same village) =2, and if family business=3.

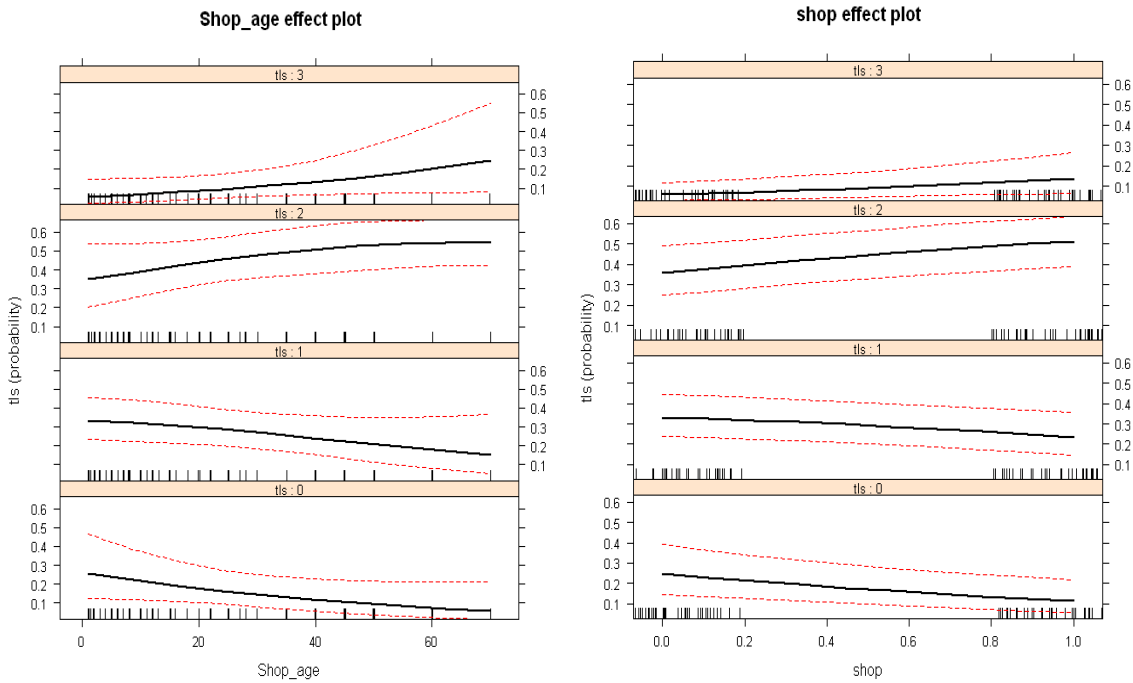
The "R" commands for the above regression are as follows:

The simplest way to find a solution for these type of models (when dependent variable is ordered) is to apply multinomial logit model. According to this model the probability for "trust on legal system (tls)" is:

$$\Pr(Y_t = j) = \frac{\exp(x_t \beta'_j)}{1 + \sum_{k=0}^{4} \exp(x_t \beta_k')}, \qquad j=0, 1, 2, 3.$$

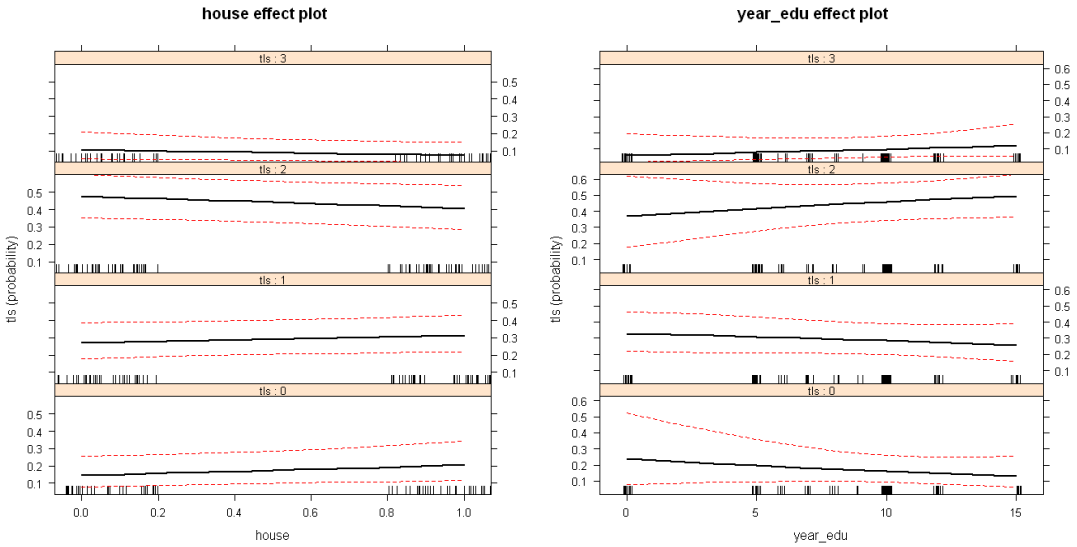
Here, x_t is a row vector of length K of observations on variables that belong to the information set of interest, and β_1 through β_j are k vectors of parameters. However the direction of change in $\Pr(Y_t = j)$, the probability of observing outcome, for a small change in χ_t cannot be inferred from the sign of β. The reason is that in a multinomial model a change in the value of a variable for a particular person affects his probability of every outcome. Since these probabilities are

constrained to sum to unity, whether $\Pr(\gamma_t = j)$ goes up or down depends upon what happens to the other probabilities. Therefore in effects it does not depend not just upon the sign of β but also upon the size of that coefficient relative to the size of other coefficients attached to the variable therefore marginal effects $\partial \Pr(\gamma_{t=j}) / \partial \chi_t$ need not have the same sign as β.



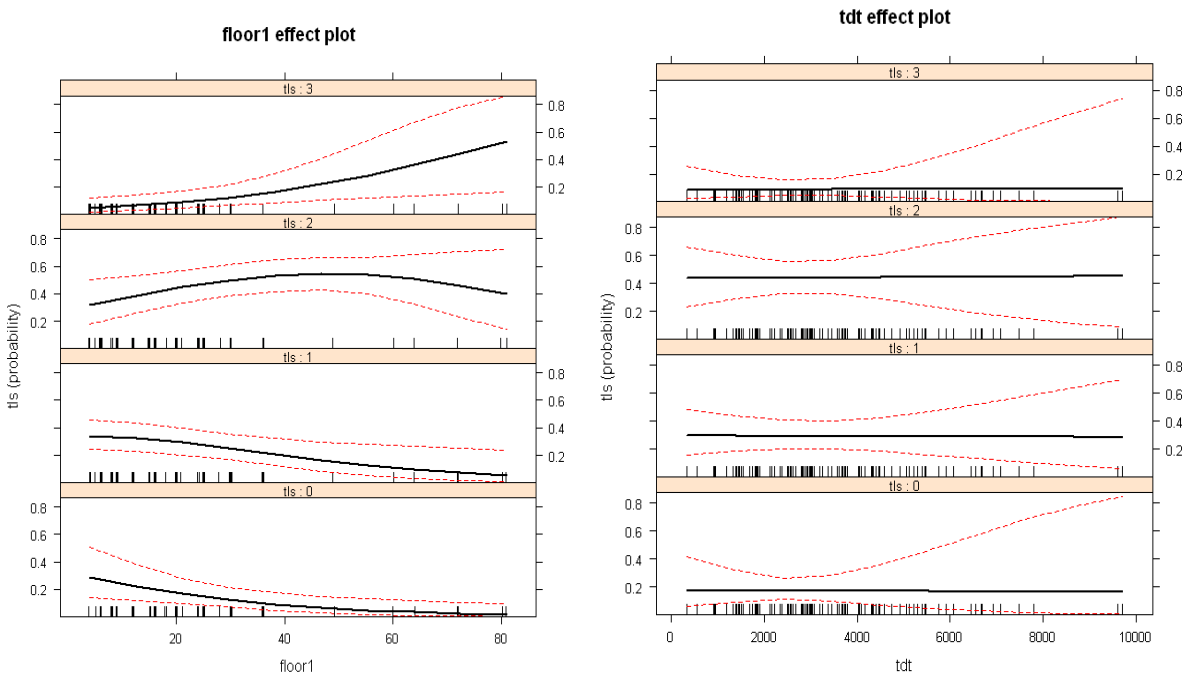
As the shop age increases, the probability of tls=0 and tls=1 declines while probability of tls=2 increases. At low value of the shop age, there is roughly roughly 0.35 probability that an individual rates tls as 1. The probability that individual rates tls=2 when the shop is very new is about 0.35, however for very old shop individuals are much more likely to rate tls=2 with probability 0.55 in comparison to tls=1 which is around 0.15. This implies that, as the shop age increases, individuals are relatively more likely to have medium level of trust on legal system whereas for very young shops the level of trust, likely to be low. It is noteworthy that Paan waalas almost never have either very high or very low levels of trust on legal system with any substantial probability. This is perhaps an outcome of gradual engagement with the legal system where through accumulated experience, Paan waalas learn to place a moderate level of trust in the legal system.

Those who run their business in rented shops, their probability to trust on legal system is higher than those who runs their business in own shops at tls=0 and 1 (i.e at lower levels of trust). For rented shops, there is roughly 0.25 probability that an individual rates tls=0 and 0.35 probability that an individual rates tls as 1 and 2. However, who run their business in own shop, individuals are much more likely to rate tls=2 which is around 0.5 in comparison to tls=0 and 1 which is around 0.1 and 0.2 respectively. This implies that those who own shops are more likely to have medium level of trust on legal system whereas those who run their business from rented shops the level of trust is likely to be low. Again it is noteworthy that Paan waalas never have either very high or very low level of trust on legal system with any substantial probability.



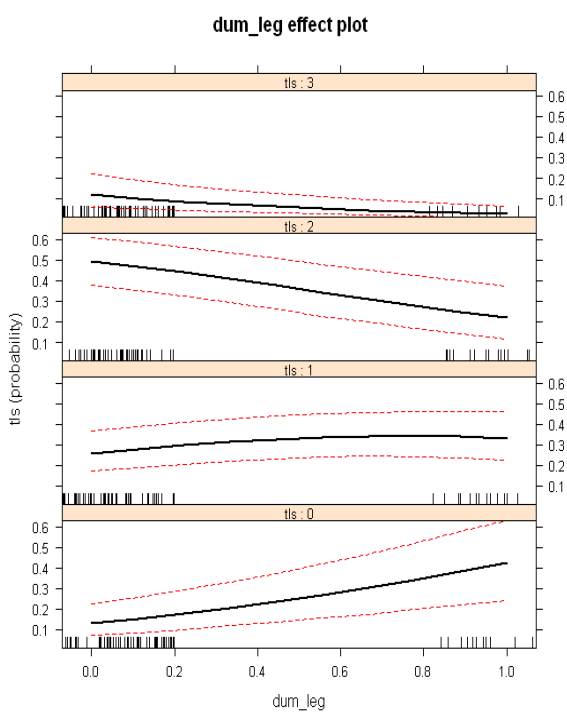
Individuals who own house in Mumbai, probability that they trust on legal system is more than those who reside in rented accommodation at tls=0 and 1(i.e. at lower level of trust). When individuals reside in rented accommodation there is roughly 0.15 and 0.28 probability that they rate tls=0 and 1 respectively. The probability that individuals rate tls=2, when they reside in rented accommodation is 0.5 and 0.4 when they have their own house. This implies that individuals are more likely to have medium level of trust when they reside in rented accommodation whereas for those who own a house level of trust is likely to be low.

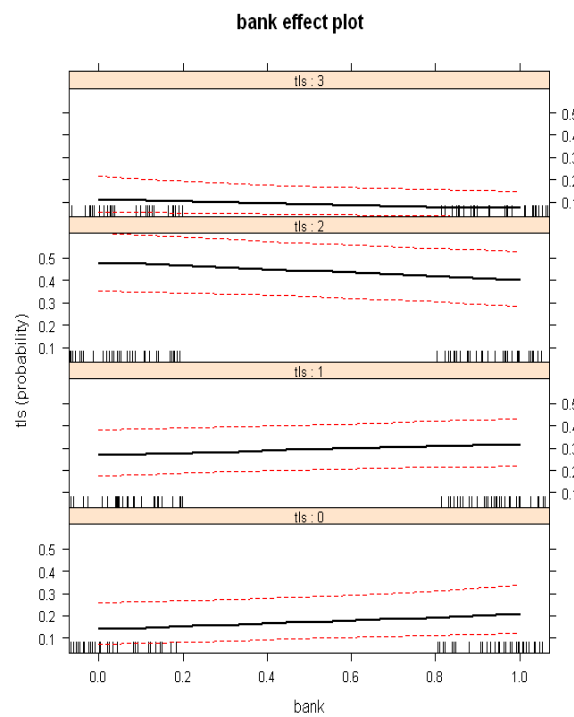
With increase in number of years of education the probability of tls=0 and 1 declines while probability of tls=2 and 3 increases. At small number of years of schooling, there is roughly 0.35 probability that individual rates tls=1. The probability that individuals rates tls=2 when they spent less number of years in school is roughly 0.38 however for higher number of years of schooling, individuals are much more likely to rate tls=2 which is around 0.5 in comparison to tls=1which is roughly 0.25. This implies that as the education level increases, individuals are relatively more likely to have medium level of trust on legal system.



With increase in floor space of the shop, the probability of tls=1,2 and 3 declines while probability of tls=3 increases. At smaller shop space, these are roughly 0.3 probability that an individual rates tls=0,1 and 2. The probability that individual rates tls=3, when shop space is very small is roughly 0.08, however for very large shop space individuals are much more likely to rate tls=3 with probability 0.58 in comparison to tls=0, 1 and 2. This implies that as the floor space increases, individuals are relatively more likely to have high level of trust on legal system whereas for very small shop space the level of trust is likely to be low.

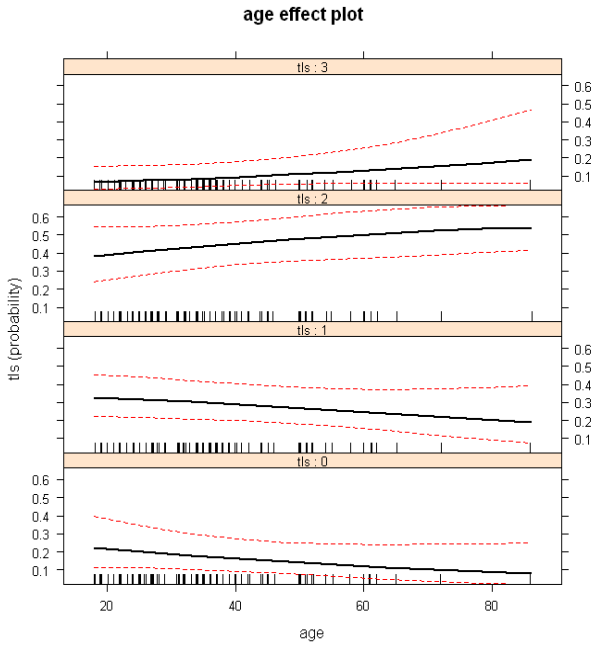
With increase in transaction, the probability that individuals trust on legal system remains constant at different levels of trust (i.e. when tls=0,1,2 and 3) remains constant but with different probabilities. Whether the transaction is low or high, individuals rate tls=2 with highest probability with 0.5 in comparison of tls=0, 1 and 2.





Individuals, who run their business in legal shops probability of tls=0 and 1 is more than tls=2 and 3. When they run business in illegal shops there is roughly 0.15 and 0.25 probabilities that they they rate tls=0 and 1 respectively and those who run their business in legal shops there are 0.45 and 0.35 probabilities that they rate tls=0 and tls=1 respectively. However, individuals who run their business in illegal shops they are more likely to rate tls=2 with probability 0.5 as compared to tls=0 and 1. This implies that those who run their business through illegal shops are more likely to have medium level of trust on legal system whereas, for those who run their business from legal shops, level of trust is likely to be low.

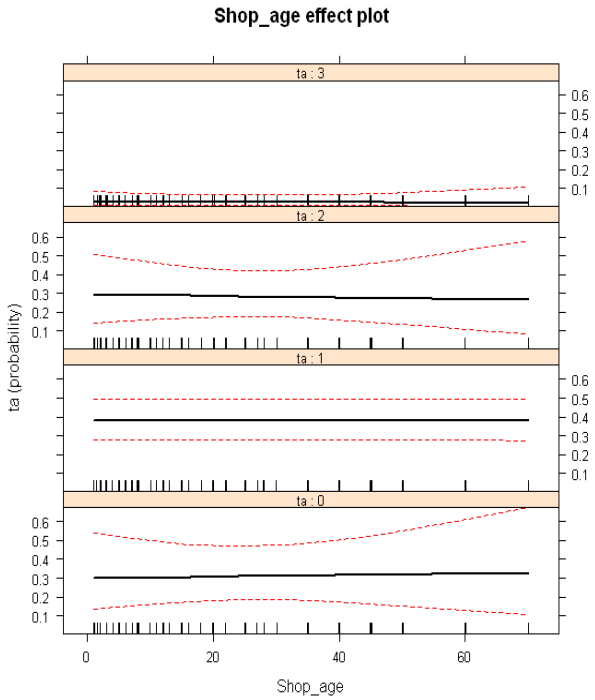
Those who have their bank account, probability of tls=0 and 1 is more than those who don't have while probability of tls=2 and 3 is less. When individuals don't have their bank account, there is roughly 0.15 and 0.3 probabilities that they rate tls =0 and 1 respectively. The probability that individuals rate tls=2 when they own a bank account is roughly 0.4 which is more as compared to tls=0, 1 and 3. However, the individuals who don't have their bank accounts are are much more likely to rate tls=2 with probability 0.5 as compared to tls=0, 1 and 3. Thus, people who don't have their bank account are relatively more likely to have medium level of trust on legal system whereas for those who have their bank accounts their level of trust is likely to be low.

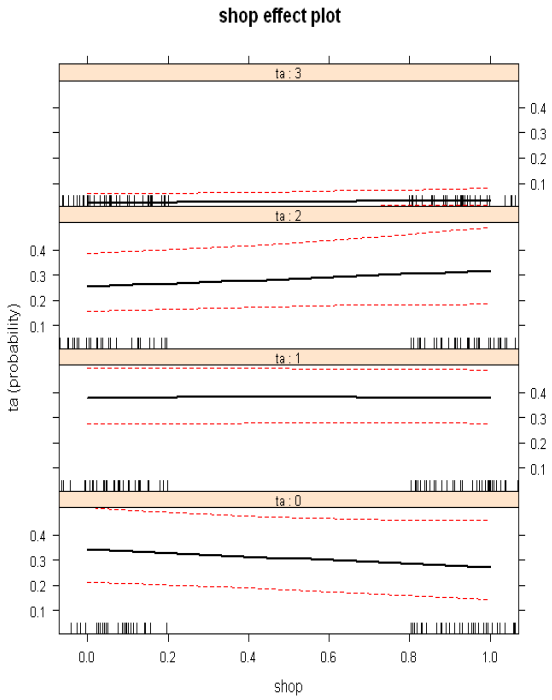


With increase in age of an individual the probability of tls=0 and 1 declines while probability at tls=2 and 3 increases. At young age, there is roughly 0.35 probability that individuals rate tls as 1. The probability that individuals rate tls=2 when the age of paan waalas is less is roughly 0.4, however, as they become older, individuals are much more likely to rate tls=2 with probability 0.5 in comparison to tls=1and 3, which is about 0.2.

Model 2:

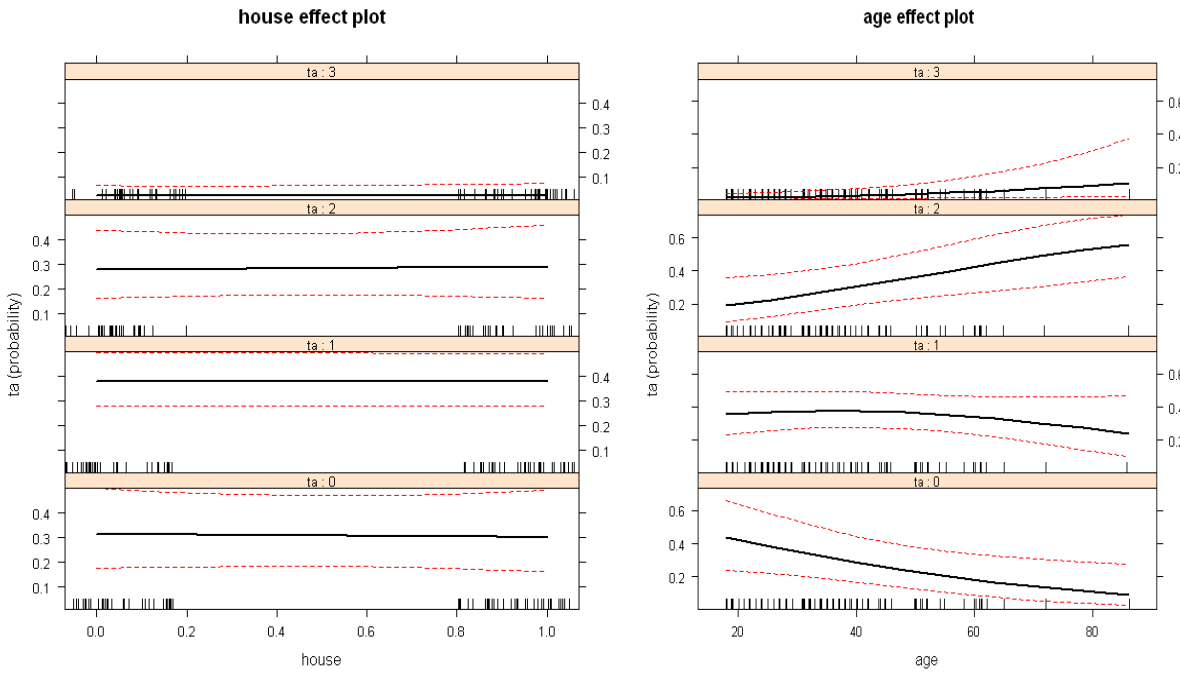
ta ~ area + Shop_age + shop + house + age + year_edu +floor + tdt + dum_leg + bank)





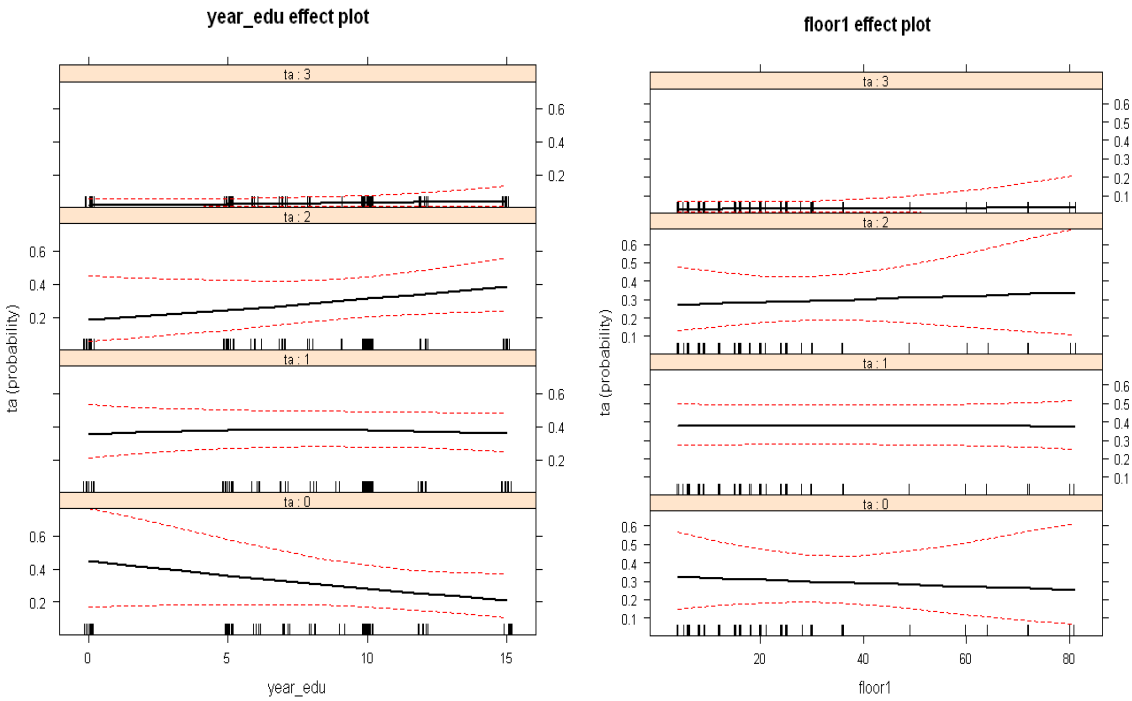
Whatever be the age of the shop probability of ta=0,1,2 and 3 remains constant but with different probabilities.

Individuals who own shop, their probability of ta=0 is less than those who run their business through rented shop. Their probability of ta=1 is constant with probability about 0.39 i.e individuals who run their business in rented shops and who run their business in own shop their trsut on administration at ta=1 remains same but with highest probability as compared to ta=0,1 and 3.

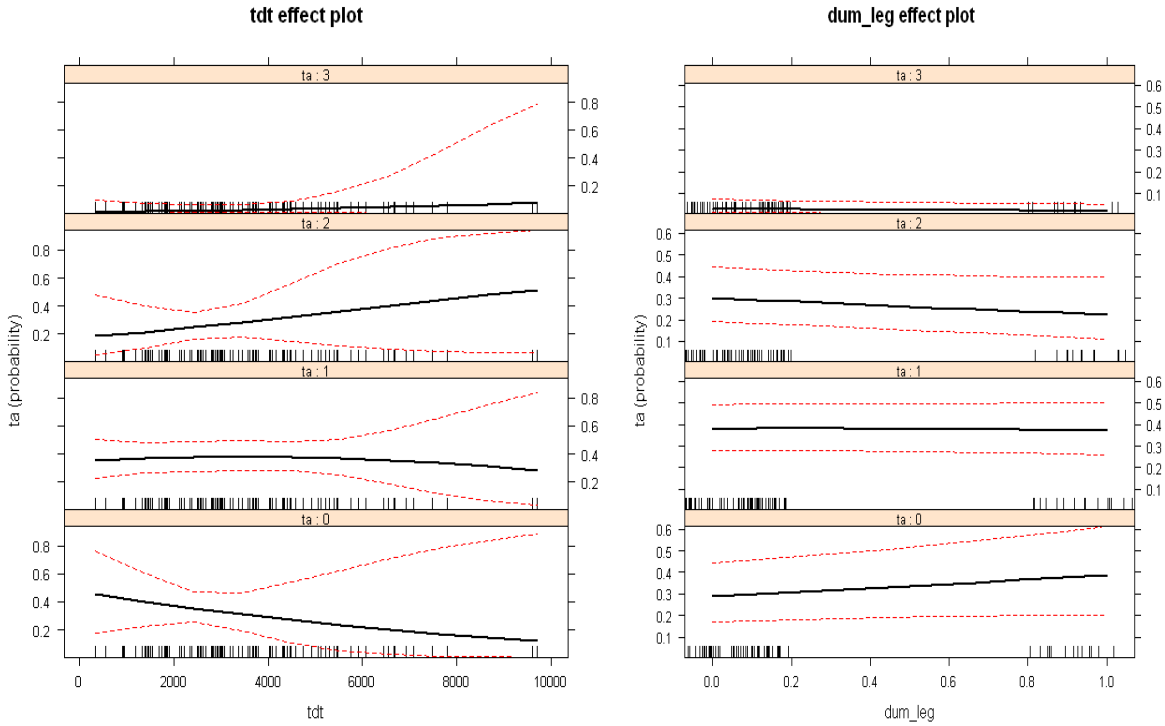


Paan walas, who own a house and those who residing in rented houses in Mumbai, probability that they trust on administration remains consatant i.e both the groups trust on administration equally at ta=0,1,2,and 3 but with different probabilities.

With increase in age of age, i.e as Paan waalas grow older the probability of ta=0 and 1 declines while probability of ta=2 and 3 increases. At younger age, there is roughly 0.41 and 0.39 probability that they rate ta=0 and 1 respectively. The probability that individuals rate ta=2 when they are young is about 0.2, however, as they grow older, they are more likely to rate tls=2 with probability 0.6 as compared to ta=0,1 and 3 which are around 0.05, 0.2 and 0.1. this implies that as the age of the individuals increases, individuals are relatively more likely to have medium level of trust on administration whereas at young age the level of trust is likely to be low.



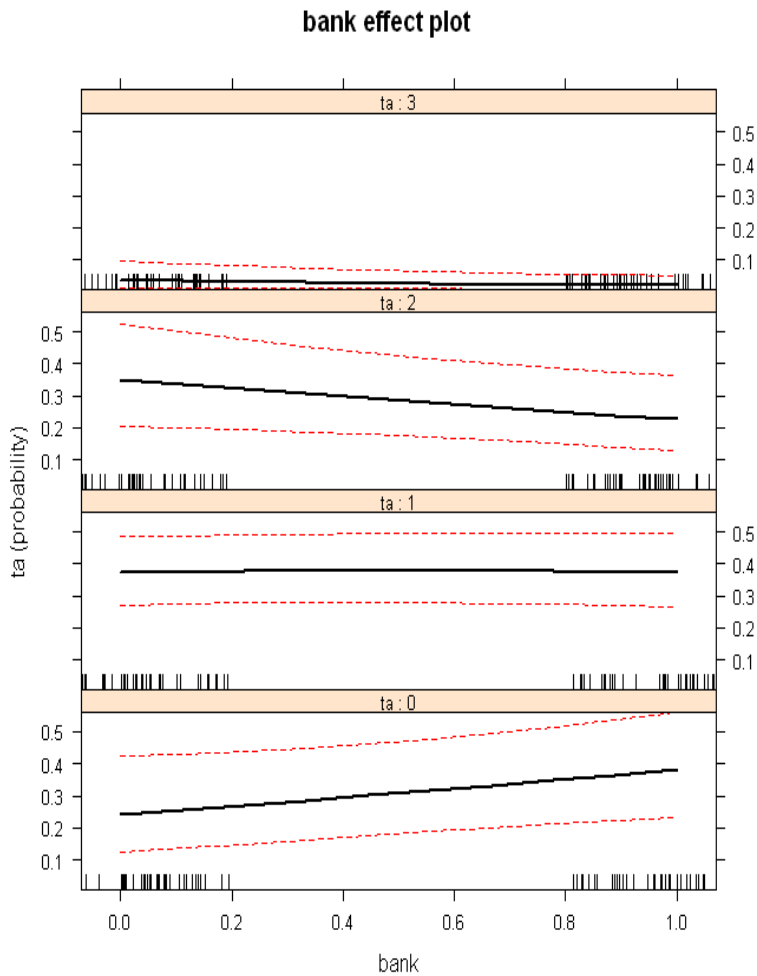
With increase in number of years of education the probability of ta=0 declines and ta=1 remains constant at roughly 0.39, while probability of tls=2 and 3 increases. At small number of years of schooling, there is roughly 0.45 probability that individual rates ta=0. The probability that individuals rate tls=2, when they spent less number of years in school is roughly 0.2, however, for higher number of years of schooling, individuals are much more likely to rate ta=2 which is around 0.4 in comparison to ta=0, which is roughly 0.2. This implies that as the education level increases, individuals are relatively more likely to have medium level of trust on administration.



With increase in daily transaction value of the shop the probability of ta=0 and 1 falls while probability of ta=2 and 3 increases. At low value of transaction, there is roughly 0.5 probability that individual rates ta=0. The probability that individual rates ta=2 when their transaction is very high which is roughly 0.56 and 0.2 at low value of transaction. This implies that as transaction value increases people are more likely to trust administration at medium level. And at low value of transaction they are more likely to rate ta=0.

Individuals doing business in legal shops, the probability of ta=0 is more than those who run their businesses in illegal shops at all levels of trust on administration.

Thus, those who do business from legal shops they are more likely to rate ta=0 with probability 0.4. This implies that, Individuals are more likely to not to trust on administration when they are doing business in legal shops.



Individuals, who own a bank account, probability that they trust on administration at ta=0 is more than those who don't have and its reverse at ta=2 and 3. When people have their bank accounts, there is roughly 0.4 probability that they rate ta=0. When people don't have their bank accounts, there is 0.35 probability that they rate ta=2. This implies that individuals are more likely to have low level of trust when they have bank account and medium level of trust when they don't have.

III. Summary output and Conclusion:

Variable		Legal System	Adminstration
Shop_age	Older shops	Medium	Low
	Younger shops	Low	Low
Shop	Own Shop	Medium	Low
	Rented Shop	Medium	Low
House	Own House	Low	Low
	rented House	Medium	Low
Year_edu	More	Medium	Medium
	Less	low	Low
Floor	More area	High	Medium
	less area	Low	Low
Dum_legal	Legal shop	Low	Low
	Illegal shop	Medium	Low
tdt(transaction)	Higher	Medium	Medium
	Lower	Medium	Medium
Bank	Own account	Low	Low
	don't have account	Medium	Low
Age	Older	Medium	Medium
	Younger	Medium	Low

Our results show that, individuals are more likely to not to trust or have very low level of trust on police. Individuals are more likely to show medium level of trust in Police only when their daily savings are high. Paan waalas who have established their shop recently, those who reside in Mumbai in their own house, those who have spent less number of years in education, individuals who are doing business with smaller floor space, those who have legal shops, those who have their own bank account, they are most likely to not to trust or have very low level of trust on formal institutions like, legal system and local administration. In case of older shops, individuals are more likely to show low level of trust on administration and medium level of trust on the legal system.

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