‘Sue Thy Neighbor’: Transition of Credit Institutions in Early Modern England

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1 Introduction

It is now a consensus among economists that institutions play a key role in shaping the course of the economy. Institutions determine the incentives an agent in the economy faces when she makes economic decisions. A significant part of the literature looked at history and explored the role different institutions played in developing the societies from the past. North, for example, attributed the growth performance of a country to the institutions of contract enforcement [North, 1991]. North and Weingast emphasized the role of England’s political institutions behind England’s growth performance [North and Weingast, 1989]. Another strand of literature, pioneered by Acemoglu, Johnson and Robinson (([Acemoglu et al., 2001])), uses cross country regressions to show that countries with better property right achieve higher national income. Rajan and Zingales [Rajan and Zingales, 1998] also find that development of financial institutions leads to higher growth rate. These papers made the point that economic success to a large extent can be attributed to the development of better institutions.

Increase in the volume of exchange leads to higher income growth. In a transaction, each party can potentially cheat. Hence, in a prisoner’s dilemma type situation, the Nash equilibrium would be the no trade situation. To sustain trade, it is important to have an institution that will punish the cheater. The institution can be ‘formal’ or ‘informal’. Formal institutions are characterized by legal codes, courts and police. The informal system on the other hand is enforced by the community. What I define as informal institutions is very close to “private order institutions”. [?]. For example, the manorial courts in the medieval England had the custom of ‘whole court’ where the whole community would act as suitors and decide about merit of a case. The scope of informal institutions is limited by the community size and flow of information within the community. As the economy grows, transactions between agents from different communities become more probable. Growth can
only be sustained if the society can develop formal institutions that supports transactions between anonymous agents. Hence, the transition from informal to formal institutions is an integral part of the process of development.

Cooperation can only be sustained in absence of a legal system if the agents interact repeatedly. Then a cheater gets cheated in the next round of transactions. But it is very unlikely that a person transacts with the same person over and over again. When a person is transacting with different people at different time points, cooperation can still be sustained if the information of past misconduct is freely available. The informal institutions that existed in history typically disseminate the information of past behavior. Maghribi traders sustained cooperation by making the information about past misconducts available for all community members [Greif, 1993]. Within specific cultural cliques, informal institutions can be extremely efficient. Because they can not support trade beyond a certain cultural limit, they cannot support trade between anonymous agents. This distinction is clearly brought out by Grief. But a cultural group can only process information about its members. Hence it supports transactions between members from its own group. Greif showed that the cooperative Maghribis were more cost effective than the individualist Genoese in maintaining cooperation. But individualist Genoese were successful in expanding the scope of their business beyond their community and hence could survive in the long run. It is also possible to support trade if two cultural groups are transacting repeatedly and cultural identities of the agents are known. This system is called ‘Community Responsibility System’ (CRS) and its role in the history of Europe is discussed by Greif [Greif, 2004]. The theory underlying the mechanism of CRS is clearly explained in a recent paper by Deb ([Deb, 2007]). Deb constructs an equilibrium in which cooperation can be sustained not by third party punishment but by community responsibility. In this system if some one cheats then the whole community is held responsible and punished by the victim.
The message is very clear. The cultural identities of the agents and flow of information about past misconduct are crucial for the operation of informal institutions. At the initial stages of development, societies develop informal institutions. But the process of economic development and the structural change associated with it can alter the underlying communal structure of a society, thereby restricting the flow of information. At that stage societies tend to develop formal institutions.

In this paper I provide a theory of transition from informal to formal credit institutions. I supplement my theory with historical data from early modern England. Formal courts are those which use formal legal codes and are supplemented by external enforcement often supplied by governments. Formal courts judge on the basis of ‘hard’ evidence and not on the basis of the private information obtained from the community members. I define a credit arrangement as a formal one if the broken contract can be brought to the formal courts. For early modern England, the common law courts were the formal courts. The informal ones were the custom based manorial courts and community level adjudications. Hence a change in the credit institutions will by and large get reflected in the evolution of legal institutions. In this paper I argue that society in early modern England got heterogeneous following rural urban migration and immigration from the continent. As a result, inter community trade increased in a way that could not be supported by informal institutions. So people turned to formal courts and volume of litigation increased. But formal courts improved by following a learning by doing mechanism. So at the later stage there was not much incentive to cheat on the lender. Consequently, contract failure and volume of litigation declined.

The paper is arranged as follows. In the next section I present the theory of institutional transition. The model has a static and a dynamic part. In each period people decide which institution to go to. Then institutions improve over time following a learning by doing mechanism. The theory is supported
by evidences from early modern England. So, in the third section I elaborate on the historical background. This section discusses formal and informal institutions and social heterogeneity in early modern England. In this section I detail the modalities of debt litigation under different institutions and their changes over time. In the last part, I test whether the implications yielded by the model are reflected in the data. For this purpose, I look at the litigation from common law courts and, examine documents on civic ceremonies which reflects the strength of community ties and informal institutions.

2 Model

The economy is characterized by a traditional sector and a modern sector. A typical example of a traditional sector is agriculture. People migrate to cities. In each period a stage game is played and that is repeated over time. In the stage game the following things happen. The settlement-litigation game presented here closely follows [Reinganum and Wilde, 1986]. However, Reinganum and Wilde pursued a different research question. They showed how allocation of litigation cost between the plaintiff and defendant affects settlement decision. In their analysis, quality of institutions is fixed while my analysis aims to study the impact of institutional improvement on litigants’ behaviour.

1. A potential borrower joins the modern sector.

2. One lender is matched with a borrower.

3. They decide which forum to go in case of a dispute. The commitment device that makes this decision time consistent is discussed below.

4. The borrower uses the borrowed fund and his effort (E) on a project.

5. The project has two possible outcomes: success and failure. Probability of success is E.
6. If success, the borrower returns the money and gets a profit \( = M \)

7. If failure, the project produces 0 return and the borrower does not return the money.

8. In the event of a failure, the lender observes the evidences that can be produced in the court and the merit of the case. I assume that in the formal court the merit of the case can be ranked and \( \sigma \) represents the rank: a higher \( \sigma \) case has higher chance of winning in the court. Borrower does not observe \( \sigma \), but knows the distribution of \( \sigma = F(\sigma) \). For informal institutions, social distances of the litigants are important as well.

9. Then the lender offers a settlement demand \( S \). If the borrower accepts that the game ends there, if not then it goes to the next stage.

10. If the borrower rejects the settlement offer the lender files lawsuit. If the lender wins he gets \( R \) and 0 if he loses.

Now I specify the commitment device for choice of court. For formal courts, the technology of writing contracts serves as a commitment device. Common law courts looked for very specific type of evidences. Those can only be secured if specific steps were observed (e.g. procuring a seal on contract, writing the contract in a specific syntax etc) while signing the contract. Observing those steps was costly and those acted as commitment devices.

Informal institutions on the other hand are run by communities. Litigation in community court was fast and almost costless. But community membership was a prerequisite for using the informal facility. Community memberships were costly to maintain. The costs were not something as paying an upfront subscription fee. They included payment for communal
ceremonies. This expenditure acts as commitment device for informal institutions. But unlike formal contracts, this expenditure is not related to any contracts. The members have to incur the cost irrespective of them being a party in litigations. The membership works as an insurance against possible dispute. Premium for this insurance would take the form of expenditure for communal ceremonies.

Let us now characterize informal institutions. Use of litigants’ personal information distinguishes informal institutions from their formal counterparts. Probability of conviction under informal institutions depends on litigants’ personal characteristics. The personal characteristics relevant for this purpose is summarized as distance from the cultural core of the community. Farther one is from the community core, less effective is the informal institution in judging a case involving him. Suppose $d_i$ is the social distance of person $i$ from the core. Then probability of conviction in a case concerning person $i$ and $j$ is given by $q_{ij} = f(d_i + d_j)$.

Litigation game played under both formal and informal institutions follow almost the same pattern. The game under the informal system there is one extra parameter that is absent under the formal system: social distance of the litigants. Timing of the game plays a crucial role here. In case of the formal system, merit of the case is unknown to the litigants when they decide over the forum for dispute resolution. Under informal system, both merit of the case and social distance of her partner are unknown. So the plaintiff chooses a particular forum for resolving dispute before the value of $\sigma$ and true social distance of his opponent ($d_j$) are revealed to him. So she evaluates and compares both formal and informal forums based on the average values $\sigma$ and $d_j$.

We solve the model in backward fashion. So, first we solve the settlement-litigation game after default. The nature of information asymmetry is differ-
ent from that in the stage of choosing the forum. Because, at the stage of choosing the forum, the asymmetry is double sided. At the litigation stage however, the asymmetry becomes one sided. The plaintiff knows about the merit of the case while the defendant does not. Remember that informal institutions has another unknown parameter $d$. It is difficult to justify why social ranking remains a private information when people are meeting for business. I assume that at the litigation stage, social ranking, expressed as distance from the community core, is a common knowledge. So the only source of uncertainty at the litigation stage for both types of institutions is $\sigma$. Hence, for both courts, $\sigma$ represents the type of the plaintiff which is unknown to the defendant. Litigation in informal system was costless in early modern England. However, common law courts were costly places to fight litigation. The costs for the plaintiff and the defendant are $c_p$ and $c_d$ respectively. We assume $c_p + c_d = 1$. The litigation game under the formal and the informal system were almost the same except the cost terms which do not appear in the game under informal system. So I solve a general game and treat informal system as a special case of this game where $c_p, c_d = 0$

2.1 The settlement-litigation game

The probability of conviction is given by $\theta_m(\sigma)$, where $\theta_m$ is the quality of institution, $m = I, F$. This assumption implies that plaintiffs with higher $\sigma$ enjoys higher probability of winning. $\theta_m$ is chosen by the court authority and exogenously given to the litigants. For the informal institutions value of $\theta$ also depends on litigants’ characteristics. So, for litigants $i$ and $j$, this is given as $\theta_{ij}$. But at the litigation stage social distance is a common knowledge. As a result, $x$ using the notation in this game does not add any extra insight. So, I choose to use $\theta_m$ for both the institutions.

Expected wealth for the plaintiff of type $\sigma$ in the event of a trial is $\theta_m \sigma R - c_p$. If the plaintiff’s settlement demand is accepted then the plaintiff gets $S$. 

8
On the other hand, expected pay off of the defendant is \(-\theta_m \sigma R - c_d\) in case of a litigation and \(-S\) under settlement.

A strategy for the plaintiff is the settlement demand. It is a function \(S = s(\sigma)\) that specifies a settlement demand for each possible level of \(\sigma\). A strategy for the defendant is a function \(\beta = r(S)\) which is the probability of rejecting the settlement demand. The defendant does not know the true \(\sigma (\sigma \in [\underline{\sigma}, \overline{\sigma}])\). So he forms a belief about true \(\sigma\) on the basis of the settlement demand \(S\). We define the belief function as \(\sigma^e = b(S)\), which assigns a unique type of plaintiff (\(\sigma\)) to each settlement demand. Given the belief function, the expected pay off for the defendant is,

\[
V_D = \beta(-\theta_m b(S) R - c_d) + (1 - \beta)(-S)
\]  

(1)

Expected pay off for plaintiff type \(\sigma\) is

\[
V_P = r(S)(\theta_m \sigma R - c_d) + (1 - r(S))S
\]

(2)

The separating equilibrium is characterized by a triple \((b^*, r^*, s^*)\) if

1. Given the beliefs \(b^*\), the probability of rejection \(r^*\) maximizes the defendant’s expected wealth.

2. Given \(r^*\), \(s^*\) maximizes the plaintiff’s expected wealth, and

3. The belief is correct, \(b^*(s^*(\sigma)) = \sigma\)

The defendant’s objective function yields the following first order condition

\[
\frac{\delta V_D}{\delta \beta} = -\theta_m b(S) R - c_d + S
\]

(3)

If this expression is positive then \(r^*(S) = 1\). If this is negative then \(r^*(S) = 0\). If this is 0 then the defendant is indifferent between litigation and no
litigation. We assume an interior solution i.e \( r^*(S) \in (0, 1) \). We substitute 
\( b(S) = \sigma \) in \( \frac{\partial V_P}{\partial S} = 0 \) to get
\[
s^*(\sigma) = \theta_m \sigma R + c_d
\] (4)

But settlement demand must maximize the plaintiff’s expected pay off. We
assume that \( r(S) \) is differentiable and get the following condition’
\[
\frac{\partial V_P}{\partial S} = r^*(S)(\theta_m \sigma R - c_p - S) + 1 - r^*(S) = 0
\] (5)

Combining (4) and (5) yields a first order differential equation.
\[-r'(S) + 1 - r(S) = 0
\] (6)

Solving the equation we get \( r(S) = 1 + \gamma e^{-S} \). We impose the bound-
ary condition \( r(S) = 0 \), where \( S = s^*(\sigma) = \theta_m \sigma R + c_d \) is the settlement
that would be demanded by the plaintiff with the least \( \sigma \). This makes the
probability of rejection function,
\[r(S) = 1 - e^{(S-S)} = 1 - e^{-\theta_m R(\sigma-\sigma)}\] (7)

Following [Reinganum and Wilde, 1986], I complete the description of equi-
librium. Suppose, \( S = \theta_m \sigma R + c_d \) and \( S = \theta_m \sigma R + c_d \). Then \( r^*(s = 1 \) for
\( S > \bar{S}; r(S) = 1 - e^{(S-S)} \) for \( S \in [\underline{S}, \bar{S}] \) and \( r^*(s = 0 \) for \( S < \underline{S} \)

2.2 Effort decision by the borrower

Let us now talk about the borrower’s decision. Just after the lending, the
borrower decides on the level of effort which is the probability of success.
If successful, the borrower gets M. If not, then the litigation game starts.
In equilibrium, the borrower is indifferent between litigation and settlement.
She pays \( \theta_m \sigma R \) if matched with plaintiff type \( \sigma \). But when the borrower
takes the effort decision true $\sigma$ is not known. He expects to confront with the average $\sigma = \mu$. Hence, he expects that if the game goes to trial he would pay $\theta m \mu R$. The cost of effort is given by $\frac{E^2}{2}$. The borrower chooses effort level to maximize the following

$$EM + (1 - E)(-\theta m \mu R) - \frac{E^2}{2}$$

(8)

The first order condition yields,

$$E^* = M + \theta m \mu R$$

(9)

From this we get the probability of failure $1 - M - \theta m \mu R$. So as $\theta m$ increases probability of failure falls. But it has positive effect on the probability of litigation upon default. Probability of litigation is a product of both the terms.

2.3 Choice of jurisdiction

Let us now analyze the decision made by the lender. Lender decides whether to commit for a particular court. It is important to specify the commitment device. For formal court, writing contract requires some specific procedures. We can think of hiring lawyers, notarizing documents, arranging witnesses, acquiring seals etc. Without these steps a contract may not be legally valid. This steps are costly and this cost act as commitment device for going to formal courts. For informal institutions, investment in community network is the device for commitment. If a community member invests, he can avail the informal network in case of a contract failure at no extra cost. Otherwise, he might choose to use formal adjudication when the contract fails at a cost $c_p$. If the project is a success then then the lender gets $R$. If not then it goes to the settlement stage and eventually to the trial with probability $r(S)$. We already know that in the equilibrium, the borrower is
indifferent between settlement and trial. Hence, if the project fails the lender expects to get $S(\sigma)$. At this stage the lender does not know the merit of the case. He expects the average merit $\mu$. So in case of failure, the lender expects to get $\theta_n \mu R + c_d$ and spends $c_p$ for litigation. So the expected payoff for the lender under formal institutions is

$$V_F = E_F^* R + (1 - E_F^*)(\theta_F \mu R + c_d - c_p)$$

(10)

Under informal system, quality of institutions depends on personal characteristics of the litigants. Personal characteristics is summarized as the distance from community core. At the time of making the investment decision, the prospective lender knows his own social distance but not that of the borrower. So he calculates the value of taking a litigation to the informal court based on average social distance ($\delta$). I assume that the investment in social network is fixed and equal to one.

$$V_I = E_I^* R + (1 - E_I^*)\theta_I \mu R$$

(11)

It is important to note that, $E_F^* = E_F^*(\theta_F, \mu)$ and $E_I^* = E_I^*(d_i, \delta, \mu)$. Borrower $j$ decides to invest in social network if

$$V_I - V_F \geq 1$$

(12)

where 1 is the cost of investment in social network. As I have indicated before, these expenditures typically included resources spent for communal ceremonies. Before solving this part, it is important to elaborate on the dynamics of investment in social network. Quality of informal institutions depends on litigants’ social position and total informational capital stock at period $t$ ($K_t$). Informational capital stock is an aggregate variable and beyond the control of individual agents. While calculating the value of informal institutions, plaintiff considers the capital stock from the last period.
He does not consider the effect of his own addition on the aggregate capital stock.

In period t agents decide whether to spend resources for social ceremonies. One typically compares costs and benefits associated with this spending decision. I assume that comparison is made on the basis social distance in period (t-1). If he decides to spend on social ceremonies then a new value of social distance is realized at the end of this period and that affects the spending decision of the next period. Social distance of person j follows the following equation of dynamics.

\[ d^j_t = d^j_{t-1} - \alpha I^j_t \]  

where \( I^j_t = 1 \) if person j decides to invest in social network in period t, 0 otherwise. The quality of formal institutions (captured by probability of conviction) is independent of personal characteristics and so assumes a fixed value \( \theta^f_t \). But quality of institutions changes with time.

\[ \theta^F_t = \theta^f_t \]  

Probability of conviction under informal institutions depends on litigants’ social distances. The probability of conviction for a litigation between person j and someone with average distance (\( \delta \)) is given by

\[ \theta^{jt} = \theta_n - d^j_{(t-1)} - \delta_{t-1} \]  

Now I elaborate on the investment decision by the lender. Investment decision depends on social distance of the lender. Equation (12) can be rewritten as

\[ E(\theta^j_t)R + [1 - E(\theta^j_t)]\theta^j_t \mu R \geq 1 + V_F \]  

Value of formal sector is orthogonal to social distance of the litigants. The relation between social distance and value of informal sector is calculated
below,
\[ \frac{\partial V_I}{\partial d_j} = R(1 - \theta_I \mu) \frac{\partial E_I}{\partial d_j} + (1 - E_I) \mu R \frac{\partial \theta^i_j}{\partial d_j} \] (17)

I have,
\[ \frac{\partial E_I}{\partial d_j} = (-1) \mu R \] (18)

and
\[ \frac{\partial \theta^i_j}{\partial d_j} = -1 \] (19)

Plugging these values I get
\[ \frac{\partial V_I}{\partial d_j} = -\mu R^2 (1 - \theta_I \mu) - (1 - E_I) \mu R < 0 \] (20)

So I find that, value of informal institutions is decreasing in \( d_j \). This relationship can be presented in the following diagram:

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Figure 1: Social distance and Choice of Legal Institutions
So, people with social distance below $D^*$ choose to invest in informal system while people $d_j > D^*$ do not invest. From this result I get the next proposition:

**Proposition 1**: People who are sufficiently close to the community core invest in the informal network and avail the informal court facility.

It is important to understand what happens to the cut off level $D^\ast$ if society gets more heterogeneous. Increased heterogeneity is captured in this model by increase in average social distance $\delta$.

Differentiating this expression with respect to $\delta$ yields the following result

$$\frac{\partial V_I}{\partial \delta} = R(1 - \theta_I \mu) \frac{\partial E_I}{\partial \delta} + (1 - E_I) \frac{\partial \theta^i_I}{\partial \delta}$$  \hspace{1cm} (21)

Now, from equations (9) and (21) we get,

$$\frac{\partial E_I}{\partial \delta} = (-1)\mu R$$ \hspace{1cm} (22)

and

$$\frac{\partial \theta^i_I}{\partial \delta} = -1$$ \hspace{1cm} (23)

Substituting these we get that,

$$\frac{\partial V_I}{\partial \delta} = -\mu R^2(1 - \theta_I \mu) - (1 - E_I)\mu R < 0$$ \hspace{1cm} (24)

As social heterogeneity increases, $V_I$ curve shifts to the left and the cut off value decreases from $D^*_1$ to $D^*_2$. This result is also intuitive. If social heterogeneity increases, the set of people who can benefit from the informal institutions shrinks. Because now, on an average the other litigant is located farther from the community core. This leaves the informal institutions less effective. As a result, more people find the formal institutions more effective than their informal counterparts.
This result leads to our next proposition:

**Proposition 2**: As social heterogeneity increases value from litigation in informal court goes down. Consequently, less people invest in social network.

One implication of this result of this proposition is that in a more heterogeneous society, formal legal institutions are used more frequently. I assume, that formal legal institutions improve if they are used by many people following a learning by doing mechanism. There is no a priori reason why institutions should improve over time. So in the next section, I back this assumption using evidences from early modern England. So in a more heterogeneous society formal institutions improve at a faster rate. In previous sections, I have described the pattern of improvement of formal institutions in early modern England. The effect of institutional improvement on probability of litigation is uncertain. Because better institutions encourage lenders
to go to court if the project fails, but on the other hand it leads to less project failure by encouraging borrowers to put more effort. Probability of litigation is given by,

\[ \Pi = (1 - M - \theta_m \mu R) \int_{\bar{\sigma}}^{\bar{\sigma}} (1 - e^{-\theta_m \rho}) f(\sigma) d\sigma \]  

(25)

where \( \rho = R(\sigma - \bar{\sigma}) \). For computational convenience, let us assume \( \bar{\sigma} = 0 \) and \( \bar{\sigma} = 1 \). Define \( I = \int_{0}^{1} e^{-(\theta_m R \sigma)} f(\sigma) d\sigma \). Differentiating \( I \) with respect to \( \theta_m \) we get

\[ \frac{dI}{d\theta_m} = -R \int_{0}^{1} \sigma e^{-(\theta_m R \sigma)} f(\sigma) d\sigma = -RI_1 < 0 \]  

(26)

and

\[ \frac{d^2 I}{d\theta_m^2} = -R \frac{dI}{d\theta_m} = R^2 \int_{0}^{1} \sigma^2 e^{-(\theta_m R \sigma)} f(\sigma) d\sigma = R^2 I_2 > 0 \]  

(27)

Using these two, let us now calculate the first and the second derivatives of \( \Pi \) with respect to \( \theta_m \)

\[ \frac{d\Pi}{d\theta_m} = -\mu R(1 - I) + (1 - M - \theta_m \mu R)(-\frac{dI}{d\theta_m}) \]  

(28)

\[ \frac{d^2 \Pi}{d\theta_m^2} = -\mu R(-\frac{dI}{d\theta_m}) - \mu R(-\frac{dI}{d\theta_m}) + (1 - M - \theta_m \mu R)(-\frac{d^2 I}{d\theta_m^2}) \]  

(29)

This implies,

\[ \frac{d^2 \Pi}{d\theta_m^2} = -2\mu RI_1 - (1 - M - \theta_m \mu R)R^2 I_2 < 0 \]  

(30)
That means probability of litigation curve is an inverted U shaped curve when plotted against $\theta_m$. It reaches the maximum for $\theta_m = \theta_m^*$ which solves $\frac{\partial \Pi}{\partial \theta_m} = 0$.

Now we find the impact of institutional improvement on the number of litigations. There are three things happening here with an improvement in institutions: volume of transactions increases, probability of failure falls and probability of litigation upon failure increases. Among them, item one and three tend to increase the number of litigations but item two works in the opposite direction. We calculate

$$\frac{dN\Pi}{d\theta_m} = \Pi N_\theta + N\Pi_\theta$$  \hspace{1cm} (31)

and,

$$\frac{d^2N\Pi}{d\theta_m^2} = \Pi N_{\theta\theta} + 2\Pi_\theta N_\theta + N\Pi_{\theta\theta}$$  \hspace{1cm} (32)

To have an inverted U shape $N\Pi$ curve, we need to have $\frac{dN\Pi}{d\theta_m} < 0$ at the optimum point. From the first order condition ($\frac{dN\Pi}{d\theta_m} = 0$) we get $N_\theta = -\frac{N\Pi_\theta}{\Pi}$. This relation must be true for the optimum $\theta$. We substitute this in the second order condition and assume that $N_{\theta\theta} = 0$ to find the following:

$$\frac{d^2N\Pi}{d\theta_m^2} \bigg|_{\theta_m=\theta^*} = -2\frac{N\Pi_\theta^2}{\Pi} + N\Pi_{\theta\theta} < 0(33)$$

This means that a maximum exists as an interior solution. Hence, the curve must be of inverted U shape. $N_{\theta\theta} \leq 0$ is the sufficient condition for this to be true. So we find the next proposition

**Proposition 3** As the quality of formal institutions improves, volume of litigation first rises and then declines.
3 Historical Background

3.1 Migration in early modern England

Social heterogeneity increased in early modern England through the channels of urbanization and immigration from the continent. This section characterizes both the processes.

There were two major waves of immigration to England from the continent during the early modern period. The immigrants were mainly the protestants who fled the continent to avoid persecution. The first wave arrived in the sixteenth century from the Flanders. The Flemish refugees brought to England what was known as “new draperies”. The term new draperies refers to a technology of woolen cloth production hitherto unknown to English producers. Beside the Flemish, Walloons from France also played a major role in the technological development. Each group specialized in different lines of production.

Immigration from the continent was not an entirely new thing to England. But immigrant communities got a formal recognition in 1550 when the ‘Strangers Church of London’ was founded by Edward VI [Goose, 2005]. Establishment of strangers church points to the growing importance of the strangers in London. In sixteenth century London as well as in some other parts of England, number of foreigners was growing. Some censuses carried out in the mid sixteenth century indicated that there were around 6000-7000 foreigners in London and its liberties [Goose, 2005]. Many other towns in the south and east of England hosted a significant size of immigrant community. Besides Norwich, immigrants played important roles in towns like Canterbury, Colchester, Sandwich, Maidstone, Southampton, Great Yarmouth and King’s Lynn as well.
The second wave of immigration arrived in the later part of the seventeenth century when the Huguenots started to migrate from France. Migration remained high throughout the seventeenth century following the series of anti-protestant measures taken by the French authority [Cottret, 1985a].

Rural urban migration was another important source of social fractionalization. Migrants from other parts of England were no more “insider” than their continental counterparts. In early modern English usage, the words ‘stranger’ or ‘alien’ referred to people from other countries while the word ‘foreigner’ might refer to Englishmen from other parts of England who did not enjoy the freedom of a given city [Cottret, 1985b]. The extent of migration within England is captured by data on urbanization.

A discussion of urbanization requires definition of urbanization. There are two possible ways to define urbanization: a) Population approach and b) Institutional approach. In the population approach we simply categorize a region as urban if the population in that place exceeds a certain threshold limit. Defining the threshold level of population is somewhat tricky. De Vries, for example, adopted a rather conservative definition of ten thousand people. By that definition there would have been only 5 cities in England and Wales 1500, which grew to 11 in 1700. ([De Vries, 1984]). But a threshold of ten thousand may be too big for early modern England and miss the point. Wrigley’s threshold of five thousands yields the following estimates [Wrigley, 1985]

Nevertheless, both studies indicate that there was a significant increase in urbanization. This finding is confirmed by the institutional approach. The institutional approach defines a city by its incorporation status. Incorporation “in its basic content....usually specified the five marks of corporatism that confirmed the city or borough as a legally constructed fictional person. In this guise, the freemen, burgesses and citizens who voluntarily participated
Table 1: Rural Urban population as percentage of total population

<table>
<thead>
<tr>
<th>Year</th>
<th>Urban</th>
<th>Rural Agricultural</th>
<th>Rural non agricultural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1520</td>
<td>5.5</td>
<td>76.0</td>
<td>18.5</td>
</tr>
<tr>
<td>1600</td>
<td>8.0</td>
<td>70.0</td>
<td>22.0</td>
</tr>
<tr>
<td>1670</td>
<td>13.5</td>
<td>60.5</td>
<td>26.0</td>
</tr>
<tr>
<td>1700</td>
<td>17.0</td>
<td>55.0</td>
<td>28.0</td>
</tr>
<tr>
<td>1750</td>
<td>21.0</td>
<td>46.0</td>
<td>33.0</td>
</tr>
<tr>
<td>1801</td>
<td>27.5</td>
<td>36.25</td>
<td>36.25</td>
</tr>
</tbody>
</table>

Source: [Wrigley, 1985]

in this person could act collectively as single body” ([Withington, 2005]). The corporate body had to pay a nominal rent to the crown for possession of their territory and jurisdiction. In exchange they had the authority to set up and run economic (e.g. markets, fairs), judicial (e.g. court) and political institutions. They were also responsible for granting the right to do business within the city territory. During the sixteenth-seventeenth century England saw rapid growth in the incorporation. Here is a table from Withington [Withington, 2005]

Table 2: First charters of incorporation in England and Wales

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Charters</th>
</tr>
</thead>
<tbody>
<tr>
<td>pre-1500</td>
<td>41</td>
</tr>
<tr>
<td>1501-20</td>
<td>3</td>
</tr>
<tr>
<td>1521-40</td>
<td>4</td>
</tr>
<tr>
<td>1541-60</td>
<td>44</td>
</tr>
<tr>
<td>1561-80</td>
<td>22</td>
</tr>
<tr>
<td>1581-1600</td>
<td>26</td>
</tr>
<tr>
<td>1601-20</td>
<td>39</td>
</tr>
<tr>
<td>1621-40</td>
<td>15</td>
</tr>
</tbody>
</table>
Both the approaches lead to the same conclusion: early modern England experienced a steady rise in urbanization. The continuous growth of urbanization would mean that anonymous agents were transacting more frequently rendering the communal institutions ineffective. The aggregate picture of higher mobility is supported by some micro evidences too. Merchants in early modern England were moving across the country to expand their businesses. In Bristol, for example, London merchants started to penetrate the town’s own industrial center. The London merchants were able to offer better credit terms compared to their Bristol based competitors. On the other hands, Bristol merchants like Paul Whitypoll, the younger Robert Thorne and George Monox shifted their headquarters to London ([Sacks, 1993]).

Urbanization requires agricultural surplus to feed urban population who are mostly in non agricultural jobs. So any trend of urbanization must be preceded by some increase in agricultural productivity, commonly referred to as “agricultural revolution”. Recent evidences suggest that an early agricultural revolution occurred in sixteenth century England [Allen, 1999], [Allen, 2000].

3.2 Debt litigation under Formal Institutions

My theory suggests that greater social heterogeneity leaves informal institutions ineffective. More people use formal legal facilities to resolve disputes. As a result, formal institutions improve. I provide support for my theory using evidences from early modern England. In the last section I elaborated on how English society got more heterogeneous following continental migration and trends of urbanization. In this section and next, I provide accounts of formal and informal institutions and detail the course of their improvements.

The English legal structure was characterized by the writ system. Placing a complaint before the court required to fit it in one of the existing writs. A writ was ”a brief official written document ordering, forbidding or notifying
something. It differed from a charter or diploma - a much older diplomatic form - because it was not so formal, solemn or detailed” [Caenegem, 1973]. There were a few original writs issued by the chancery and some additional ‘judicial writs’ issued by the central courts. This system was firmly in place by the thirteenth century.

The problem of writ system was that the writers of those writs could not have preempted all the possible forms of actions. This view was admitted by the famous medieval commentator of Law, Bracton ‘Tot erunt formu-
lae brevium quot sunt genera actionum’ ([Maitland, 1941]) - there may be as many forms of action as there are causes of action. Expanding the number of writs was necessary to increase the effectiveness of the common law. But popularity of Royal courts would imply less importance for the manorial courts. Running an effective manorial court of justice was important for the feudal lords to maintain their positions in the political power structure. So the interest group formed by the Barons were intimidated by the growing popularity of the Royal judicial system. They managed to pursue Henry III in prohibiting the chancery clerks issuing new writs (Provisions of Oxford, 1258). By the end of thirteenth century it became an accepted norm that chancery clerks could not issue a writ if the plaintiff’s case does not fit into one of the existing forms of action. That limited the effectiveness of the common law courts. But courts found innovative ways to fit different varieties of cases in the straitjacket of the medieval writs.

The writ of debt is more important for this study. The debt action was further classified into debt sur obligation (DSO) and debt sur contract (DSC). Between them, DSO represented a more formal form of action and required the plaintiff to submit a sealed document as the proof of the debt. Debt sur contract (DSC) on the other hand meant to deal with informal agreements but had some archaic features which required improvement. Quid pro quo, sum certain and wager of law were three distinguishing features of this action
which also limited its effectiveness. A lawsuit under debt writ was created
by the fact that defendant refused to pay for some benefit he received. To
start a debt action something must have been transferred to the defendant.
This principle is known as the quid pro quo. This was a major difference
from the modern contract legal theory, where a contract is an agreement to
do something in the future, Debt action also required sum certain, which
means that the value to be paid back has to be fixed at the time of contract.
In the broken sales credit, this requirement was hard to fulfill, because the
price might not be negotiated at the time of contract.

Wager of law was another very important component of laws looking over
credit contracts. It was long recognized in the anglo saxon tradition that
the defendant should have the right to wage his law. The procedure had
two steps. First, the defendant had to apply for this provision and Second,
once granted, on a specific date, the defendant had to appear with eleven
oath takers or 'compurgators'. The oath helpers did not have to make any
statement about the transaction, they could not be interrogated either. They
would just testify that the defendant was a credible person. In the dynamics
section I will discuss how these characteristics restricted the effectiveness of
the debt writ.

3.3 Dynamics of Formal Institutions

In this section I detail the improvements of formal institutions during
early modern period. The improvements in institutions do not mean an
enhancement in the fact finding ability of the courts. The improvements
essentially mean admission of new kind of evidences in legal codes. In the
last section I described the major characteristics of debt writ. Below, I will
discuss how these clauses limited the effectiveness of the traditional debt writ
and the solutions adopted.
The *quid pro quo* clause would require a real exchange between parties. This was particularly problematic if there was a third party benefiting from the transaction. For example, if A promises B (who is a doctor) a money for the treatment of C, then the term *quid pro quo* does not apply here. So, if A does not pay B after the treatment then B can not sue A under the debt writ. Another very binding feature of the debt writ was *sum certain* meaning that there should be a certain promised sum of money. Again, that was not required for the writ of Assumpsit. Assumpsit could deal with uncertain sum and around the end of the sixteenth century Assumpsit was frequently used for uncertain sums. In response to that, in early seventeenth century debt action was allowed to deal with the case of uncertain sum. Also, debt writ viewed a contract as a one whole transaction. Hence, installment debts could not be enforced using debt writ [Simpson, 1975]. If a debtor did not pay a few installments he could not be brought to the court until the day for the last installment was gone. Another restrictive clause of debt writ was the wager of law, whose limitations we have already discussed in section two.

In the last section I described the clause of wager of law. I can imagine that ‘*wager*’ would work in a more cohesive society, where costs of false testimony were very high. This would not be the case where anonymous agents from different background are meeting and making contracts. Hence wager of law would restrict the effectiveness of Debt writ when the society is getting more dynamic.

I will analyze both the *de facto* and *de jure* institutional developments to address these inefficiencies. The *de facto* measures include the innovative ways people found to fit a cases in the straitjacket of the writ system and the *de jure* measures involve the constitutional changes to accommodate the changing nature of transactions. However, *de jure* measures were slow to come. So, the ways plaintiffs adopted to overcome this limitation are worth analyzing. Arguably, the most popular detour was the use of *assumpsit*. 
Assumpsit was an action whose origin was in the trespass in King’s Bench. “Trespass appears circ 1250 as a means of charging a defendant with violence but no felony” ([Maitland, 1941]). The violence could be of different types: to body, to land, to goods. Trespass to goods is an action which results in damages, non return or carrying off the goods from the plaintiff’s possession. By the end of fourteenth century a new type of actions were introduced which were technically referred to as trespass, but in reality were able to take account of far more diverse types of cases.

Assumpsit was a major offshoot of this procedural innovation. The advantage of this form of action was that it did not require formal agreement under a seal or existence of quid pro quo. Deafulters could be sued using this writ because of breach of promise. During the early modern period, the majority of the cases coming to the courts were sales credit. The credit relations were part of the supply chains. Because of the nature of the credit relations, sealed contracts were not very useful. Because signing a sealed contract was costly and time consuming. As we have already noted, the debt writ was not flexible enough to deal with problems related to contracts without a sealed deed. The evidences that were being generated by the new trade practices were not always consistent with the requirements of the Debt writ. Assumpsit, being more flexible, provided better remedies for disputes that could not be resolved using the debt writ. However, Assumpsit had its own deficiencies and went through significant improvement during the sixteenth century. This also lends support to my story of institutional improvement.

Because of the Assumpsit’s efficiency, a number of attempts were made to replace the Debt writ with Assumpsit for dealing with debt cases. The Court of Common Pleas tried to resist this trend as litigations under Debt writ were their exclusive jurisdiction. Accepting Assumpsit as the correct remedy for debt cases would have meant other courts could judge debt cases as well. This would increase the competition for Common Pleas. Hence the
Common’s Plea judges were keen not to allow the use of Assumpsit for debt cases. In the second half of the sixteenth century, King’s Bench, the other Royal court at Westminster, was regularly using Assumpsit as a remedy for contract failures which were mostly coming out of sales credit. In 1532 the King’s Bench formally allowed Assumpsit to be used in lieu of Debt in the case of Pykeryng vs Thurgoode. The judges of Common’s Plea kept resisting it and then finally they gave in in 1602. Common’s Plea allowed the use of Assumpsit in lieu of Debt as the form of action in the Slade’s case. This section elaborates on how changes in social environment and business process created demand for institutional improvement and, how this demand got translated into actual improvement following competition for cases between the courts.

3.4 Informal institutions in early modern England

Informal legal institutions are usually executed by community councils and their proceedings are usually not very well documented. Some of the informal institutions in early modern England, however, were quite organized and their operations were well documented. The Law Merchant and Guilds were the most important informal institutions for dispute resolution. Both the institutions qualify as informal institutions because litigants’ reputations were of key importance in the process of adjudication. Moreover, social sanctions rather than state endorsed force were the means to execute punishment.

Law Merchant or Lex Mercatoria refers to the body of laws followed by the merchant communities across Europe. Despite some regional characteristics, the general structure of the law was same everywhere. During late medieval and early modern period, fairs and markets were the major sites of business dealings all over Europe. The law merchant courts were based on fairs and markets and were distinct from the state law. In England, The towns such as Winchester, Stourbridge, London, Bristol and many others had law merchant

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courts. Law merchant tradition and its mechanism in the Champaigne Fair has been analyzed by North, Milgrom and Weingast ([Milgrom et al., 1990].

Speedy justice and use of community information for adjudication were two distinguishing features for the Law Merchants. Because of the speed of justice delivered, the law merchant courts in England were often referred to as piepowder courts. The name was derived from the fact that justice was expected to be administered quickly (“while the dust fell from the feet” [Scrutton, 1909a](p9). Because of the rapid nature of business in the law merchant courts, it is difficult to find documents detailing the court procedures. In the few documents recovered, rarely a case was reported as showcasing a particular rule. In the law merchant cases, facts and customs were almost indistinguishable [Scrutton, 1909b]. Besides the fairs, law merchant was also applied to courts in some English trading centers known as Staple Towns. There were eleven such towns in England, one in Wales and four in Ireland that were named as the staple towns. These courts, known as ”staple courts”, used law merchant instead of common law. Organization of these courts was characterized by communality. If aliens were the party to a litigation the juries were formed by two alien merchants one of who came from the north and the other from the south [Holdsworth, 1907].

The other major informal forums for dispute resolution were the trade and merchant guilds. The guilds are known for their organized efforts to protect monopoly rights of production. On another level, guilds were very effective as alternative institutions for dispute resolution. The guild courts would regularly resolve disputes among their members. In this context, they were in direct competition with the common law courts. Many guilds imposed fines on their members for bringing cases to the common law courts before submitting them to their affiliating guilds [Rawcliffe, 1991] (pp-106). This probably hints at the fact that the lower costs of using guild courts were not sufficient to compensate for the better quality of common law courts.
4 Empirics

4.1 Litigation Data

In this section I present data from various sources to see if data matches with the predictions of the model. First, I present litigation data for a period of 200 years from the central courts in London and a few borough courts. There were two central courts in Westminster: Common’s Plea and King’s Bench. I present borough courts’ record from King’s Lynn, Bristol, Exeter, Shrewsbury and Great Yarmouth. London was one of the greatest cities of early modern Europe. The other cities were not that large. Nevertheless, they were important trading centers. The model predicted an inverted U shape. The data presented here is consistent with the prediction. The litigation counts show a big increase starting from 1500, reached a peak and then started to decline from the seventeenth century. This pattern was not isolated to one court. First I look at some secondary data, retrieved from the court rolls and reported in the secondary literature [Muldrew, 1998]. Next, I present the data I collected from National Archive.

![Figure 3: Rate of litigation in Central Courts during early modern period](image)

Figure 3: Rate of litigation in Central Courts during early modern period
The graph shown here is the rate rather than total volume of litigation. The rate is calculated by dividing the number of court cases by the number of households. For the borough courts, the total number of households within the borough was taken into consideration. For the central total number of households in England appears as the denominator in the calculation. However, the total volume data shows the same pattern. Rate is considered as a robustness check. This was to make sure that the volume of litigation was not just reflecting the population dynamics.

For exploring the issue further, I collected data from the National Archive, London during the period May-June, 2008. There are two main source materials for studying English Legal History: Plea Rolls and Docket Rolls. Plea rolls are files containing the detailed information for the cases brought to Common’s Plea and King’s Bench. None of them, however, contains the judgment. Plea rolls give us all the details about a case but not the judgment.
The other source materials are the Docket Rolls. Brooks, in his seminal work, used Docket Rolls instead [Brooks, 1986]. When a case entered advanced (pleading) stage, a short description of the case would be recorded in a file called docket roll. The entry typically contained the names of the litigants or their attorneys and the place where the dispute took place. So one entry in the roll would represent one case. The information held in docket rolls are brief but docket rolls are useful for constructing the time series. The docket rolls are referred to as CP 60 in the National Archive catalog. There are 1183 rolls covering the period 1509-1859. In the period between 1509 and 1722 there are 910 rolls. The case information were recorded by the court clerk known as the "prothonotary". The Docket Rolls are often known by the name of the prothonotary who recorded that. In Brooks and Muldrew, the sample was drawn in fifty years difference. I, instead took it in twenty years difference.

![Total Litigation in Common's Plea](image)

**Figure 5: Litigations in Common’s Plea**

The figure we get here is quite consistent with the figure presented in Muldrew. The only difference is probably the sharp drop in 1642. In Muldrew,
The number of actions per household is plotted against time. I first present the absolute number of cases originating from London and then those numbers as fraction of total number of cases brought to the court. The graph depicting the total number of cases from London shows almost the same pattern as the aggregate picture. The peak in this case occurs in early seventeenth century which is same as the total litigation curve.

![Total Number of Cases from London](image)

Figure 6: Total number of Cases originating from London

The graph plotting fraction of cases originating in London depicts the inverted U shape as well. But the peak occurring much earlier, around mid sixteenth century. I would argue that this is consistent with my story of institutional improvement. The central courts being in London had been more effective in enforcing contracts around London. So initially it was attracting more people from London. The graph on the volume of litigation
from London suggests that even after mid sixteenth century, a great number of people from London were coming to Common Pleas and it was increasing. But over time, information about the effectiveness of the central courts got disseminated to other parts of England. So after this time point, people from outside London were coming to the courts at a higher rate.

4.2 Civic ceremonies in early modern England

One corollary of my theory is the decline of informal institutions. But data insufficiency makes it difficult to verify this. So I adopt an indirect approach. Personal information was crucial for operation of informal institutions. In my view, community ceremonies were in general instrumental in circulating and processing such information. So decline in civic ceremonies can act as a proxy for decline in informal institutions.
Participation in ceremonies was costly and community members sometimes complained of burdensome expenses for the ceremonies. Participation costs for these ceremonies can be interpreted as investments in social network. Decision to invest depends on return to investment i.e. dispute resolution at low or zero cost. But informal, community based institutions can only resolve disputes involving members of the same community. So the return is low in a more heterogeneous society where chances of signing inter community contract is high. In that case, people have less incentive to invest in social network which would take the form of ceremonial expenditure. Then, one test for my theory will be to check what was happening to the civic ceremonies in early modern England. It is difficult to get financial accounts for those ceremonies over time. Even if they are available, it is difficult to compare. So, I am mostly looking at the accounts of such ceremonies to understand if there were any changes in popular participation in those events.

First I look at Corpus Christi as this was actively celebrated by guilds. Corpus Christi literally means “the body of the Christ”. This feast was celebrated in England for the first time in the year 1325 [James, 1983]. In the course of fifteenth century the ritual spread widely across different parts of England and became predominantly urban. On the day of Corpus Christi a mass would take place followed by a procession through the town. It was mandatory for the guild members to participate in the procession. The guilds would walk in the procession in an ascending order of wealth. The members of less important crafts would walk in the beginning followed by wealthier and more important crafts. In many towns, the procession was accompanied by pageants– moving wagon platforms. Typically, guild members would stage dramatic representations of scriptural scenes and themes. In some towns, full length plays, known as Corpus Christi cycles, were enacted. Such cycles survive from Chester, Coventry, York and Wakefield [James, 1983].
In London however, Corpus Christi was not the most important ceremony. Shows such as midsummer shows and Lord Mayor’s show marked the high points of London’s ceremonial calendar. John Stow, writing in 1598, mentioned that reconciliation of disputes was an important aspect of the festivals. “These were called Bonefiers as well good amitie amongst neighbours that, being before at controversie, were there by the labour of others, reconciled, and made of bitter enemies, louing friends, as also for the vertue that a great fire hath to purge the infection of ayre.” [Berlin, 1986] The midsummer show would consist of a candle lit procession and pageantry performed by guild members. The midsummer show was later replaced by Lord Mayor’s show. Lord Mayor’s show would celebrate the commencement of Lord mayor’s term. This show was London’s unique feature.

Conventional view about civic ceremonies is that they were important for social integrity [James, 1983]. But social ceremonies can also interpreted as the instruments for disseminating information about community members. Such information were crucial for operation of informal institutions. This explains why community councils always imposed mandatory participations in those ceremonies. So, fall in participation in ceremonies or discontinuation of ceremonies would have adverse effects on informal institutions.

During the course of the sixteenth-seventeenth century number of civic ceremonies were discontinued. Corpus Christi cycles went into oblivion for number of towns. From the study on Coventry we find that number of processions or pageants were discontinued. By 1547, the processions of St. George’s day, Ascension, Whitsun and Corpus Christi were discontinued. Around the same time summer processions also came to a halt. The sacred plays were last played in 1591. By seventeenth century, the formal communal procession had totally disappeared from the streets of Coventry [Phythian-Adams, 1972]. The only form of ceremonies that survived were the ones that marked the official inauguration. In York Corpus Christi was
discontinued around 1570 [Palliser, 1972].

In London, ceremonial calendar had undergone some changes during the fifteenth and sixteenth century. Throughout the sixteenth century, London’s midsummer show was halted for number of times. In the course of sixteenth century the show went into oblivion despite attempts for its revival in 1541, 1564, 1569 and finally in 1585. [Berlin, 1986] In London, Lord Mayor’s show assumed the center place in the ceremonial calendar of the sixteenth century. Lord Mayor’s show continued for long time. However, this show lost its glory in the beginning of the eighteenth century. The show was stripped of elaborate pageants and became a mere procession. [Withington, 1926]

Craftsmen’s unwillingness to bear the cost of ceremonies was a common issue in the civic life of early modern England. In 1561, for example, the painters in York pleaded that they should be exempted from their duties in Corpus Christi. This was no exception. Appeals like this were very common in the sixteenth century York [Davidson, 2006]. However, some caution should be maintained while interpreting these pieces of evidences. Because the second half of the sixteenth century was the period of York’s decline. However, the tradition of Corpus Christi started in York in 1376 and survived many economic, social and religious turmoils [Davidson, 2006]. So economic factors cannot explain this decline completely. Similar complaints are found in contemporary documents from Chester, Bristol and Lincoln [Berlin, 1986].

5 Conclusion

The paper analyzes institutional transition from informal to formal. In the model, the quality of formal institutions is orthogonal to individual characteristics. The quality of informal institutions however, crucially depends on individual level information. Flow of such information is smooth in a rela-
tively closed society. Informal institutions are executed by community based organizations. Such organizations cannot access information about someone who is culturally very different from the rest of the community and, this results into weaker informal institutions. So, agents’ social distance from the communal core is negatively related to the quality of informal institutions. This implies worse informal institutions in a more dynamic society.

In the model, people choose and commit on the forum of dispute resolution at the time of signing contract and, before the projects actually succeed or fail. People compare the value of contracts under informal institutions with that under formal institutions. Value of informal institutions are negatively related to the social distances of both litigants. One knows his own social distance from the community core but not of his future business partner. So people base their decision on average social distance. Rise in social heterogeneity leads to higher average social distance and lower quality of informal institutions. So people start using formal facilities as social heterogeneity goes up and formal institutions improve following a learning by doing mechanism.

The theory has two major testable predictions. Improved formal institutions will lead to an inverted U shaped litigation. Decline in informal institutions on the other hand will lead to lower number of civic ceremonies. I find supporting evidences from early modern English history. I provide both primary and secondary data to show that litigation curve confirms the theory. Evidences on social ceremonies also show that during this time number of social ceremonies declined or lacked popular participation.

The most important of source of variation in my model is social heterogeneity. In early modern England this was triggered by urbanization and continental migration. My theory suggests that higher degree of heterogeneity is positively related to development of formal institutions. This, however,
runs contrary to the conventional wisdom. An important section of existing literature shows that institutions perform worse in a more socially heterogeneous environment [Alesina et al., 1999], [Easterly and Levine, 1997]. This paper also does not explain persistence of informal institutions.

Applicability of my theory is contingent on structures of both formal and informal institutions in relevant places. The papers on ethnic fractionalisation and economic performance deal with a very specific set of institutions with main emphasis on the institutions of public goods provisioning. Public goods are often provided by some level of government. So transition is not a relevant issue here. Also, most of the papers do cross county study which cannot capture the dynamics of informal institutions within a country. Hence, the results from those papers are not directly comparable with my results.

Another important question is the persistence of informal institutions in less developed countries. Increased social heterogeneity can alternatively give rise to community responsibility scheme (CRS), thereby strengthening the informal system. For example, Indian caste system can be seen as a contract enforcement mechanism based on CRS [Freitas, 2006]. Again, persistence is conditioned upon characteristics of specific informal institutions. My conjecture is that in places where the degree of social mobility across communities is low, CRS is a more likely outcome. In case of England social mobility was higher than a typical caste based society. People could choose trades other than his family trade through apprenticeship. For a good number of societies, social mobility was not as restricted as under the caste system. So the analytical framework presented in this paper can be used to explain institutional transition in other societies.
References


