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"Crises and norms"

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Abstract

Norms of behavior have a great effect on humans' behavior. Norms of honesty, fairness and proper behavior shape the performance of societies. But what is considered an acceptable behavior in one period may be considered a totally unacceptable in another period. Norms of behavior keep changing over time. The paper presents a setup in which the importance of each norm is being changed endogenously depending on individuals' behavior. The stable social norms may change as a result of a shock. Crisis may provide an exogenous shock that may change people's attitude towards these norms of behavior. The effect of crisis may depend on the nature of the action, its observability, the relationship between deviation from the norm of behavior and the occurrence or severity of the crisis.

1. Introduction

Human beings are not just selfish maximizers. People typically live in societies or in groups. Thus the characterization of Homo Sociologicus is an importance characterization of human behavior although it contradicts the standard assumptions of Homo Economicus. An important part of assuming that individuals are social animals is to understand that in every group there are norms of behavior which provide an acceptable code by all the members of the group. This code of behavior deals with the way we dress, eat or interact. There are norms that specify what an honest, proper or fair behavior is. Societies often have shared values that members of the society are encouraged to follow. The list of behavioral guidelines is typically referred to as social norms.[1]

Every time an individual's behavior diverges from a norm, this act impacts on the other members of society, who then punish the deviant individual (see for example Akerlof (1976, 1980), Cole, Mailath and Postlewaite (1998) and Young (2006)). Norms are enforced by social punishments. The most familiar social punishment involves the attitudes and reactions of other society's members.[2] For such social punishment to be effective, behavior must be observable. But norms may affect our behavior even when this behavior is not observable. In these cases social punishment can be also self-inflicted (see also Benabou and Tirole, 2004 and Gneezy, Fershtman and Hoffman, 2011).[3] Social

[1] See for example Ullmann-Margalit (1977), Akerlof (1980), Elster (1989), Cole, Mailath and Postlewaite (1992, 1998), Hechter and Opp (2001), Bicchieri (2006) and Young (2006).

[2] Sometimes the social punishment itself is costly and in order to enforce it punishing becomes also a social norm implying that individuals who are not punishing for certain behavior would be punishment themselves for violation of the social norm (see Akerlof 1976).

[3] When talking about taboos-tradeoffs Joseoh Raz (1986, p. 22) claims that "*It diminish one's potentiality as a human being to put a value on one's friendship in terms of improved living conditions*". Similarly Fiske and Tetlock (1997, p.256) claim that "*to attach a monetary value to one's friendships of one's*

norms are an important part of any social identity[4]. Adopting an identity implies accepting the social norms associated with this identity. The desire to maintain an identity and to view oneself as a moral honest person as defined by one's identity is an important consideration that defines the self-inflicted cost of violating a social norm.[5]

But we live in dynamic societies in which there are frequent changes of norms. One explanation for such changes is cultural dynamics by which immigration change the fabric of society and induce changes on its norm. The norms are also been affected by changes in the incentives facing individuals in this society. But social norms may change as a result of some exogenous shock that may change the way people view the reality in which they live. Such an exogenous shock can be a war or an economic crisis. There is an extensive literature on economic crisis that deal with different ways to deal with them and the reasons for their occurrence. But an interesting aspect of such crisis is the way they affect and change the society in which we live. Crisis may change the concept of honest and fair behavior. Such changes of norms may have a huge effect on the economic interaction and performance even though many people would not view them as economic variables.

In order to study the dynamics of social norms we present a simple model in which individuals need to choose an action which provides them private benefits. There is a norm of behavior which specifies the proper action to take. Individuals however may decide whether to comply with the norm or to deviate in order to maximize their private benefits. Individuals that deviate are subject to social punishment. The social punishment

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children or one's loyalty to one's country, is to disqualify one from certain social roles. People feel that making such an evaluation demonstrates that one is not a true friend, or parent, or citizen".

[4] See George A. Akerlof and Rachel E. Kranton (2000) for a discussion on social identity.

[5] As Haidt et al. (1997) and Daniel M.T. Fessler and Carlos David Navarrete (2003) argue, these costs may involve negative emotions such as fear or disgust.

depends on whether the action is observable or not. We assume that even when the action is not observable there is a self-inflicting punishment. Individuals however may differ with respect to their social concerns and the severity that they associate with social punishment. Some ignore it while for others it is very important. The severity of the punishment depends on the strength of the norm. That is, there is a more severe social punishment whenever the norm is strong. The strength of the norm however is endogenously determined. When many individuals deviate from the norm their actions contribute to the weakening of the norm.

We next turn to consider on the effect of having a crisis on the stable social norm. We assume that the percentage of individuals that deviate from the norm determine the probability of having an economic crisis (as well as the severity of the crisis). In terms of our model we can think about different possible effects. When the behavior is observable, the crisis does not convey any information about the behavior of other individuals in the group as their behavior is directly observed.[6] But even when crisis does not provide additional information the occurrence of crisis may change the cost of deviation from the social norm. Crisis may make people "angry" which implies that now when they realize the cost of deviation they are impose a harsher social penalty on deviators. On the other hand when actions are not observable people do not know what is the percentage of people that deviate and therefore whenever there is a crisis they may update their beliefs about the frequency of such a behavior believing that deviation is more frequent than what they thought. This adjustment process weaken the norm encourage more people to

[6] For this assumption to be correct we need to assume that when behavior is observed people know the exact proportion of the population that deviate from the norm. This assumption does not necessarily hold. People may observe the behavior of other individuals but it is not clear that they have an exact perception about the aggregate behavior in their society. In this case the occurrence of a crisis may provide relevant information about the aggregate behavior of other individuals.

deviate. We therefore have two conflicting effects. However, in many daily activities actions are only partially observable and therefore the two effects are relevant. On the one hand the crisis makes people react more harshly towards deviators as they have just realized the cost of the crisis. While on the other hand the crisis indicates that many individuals deviate from the norm and may be the norm is not as strong as individuals thought it is. Clearly the overall effect depends on the balance between these two effects.

2. Social norms: Observable Actions

2.1 A model of stable social norms.

Consider a society in which there are two groups denoted by "R" and "P". We assume that the two groups are of the same size and we normalize the size of the entire population to 2. Each individual i in this society must take an action $a_i \in A$. There is no direct interaction between the agents in this society and payoffs are determined as a function of the agents action choice and given by $\pi^R(a_i)$ and $\pi^P(a_i)$.

We assume that there are social norms in this society that dictate the appropriate actions. For example one may think about norms of fairness and honesty such that an "honest behavior" uniquely defines the individuals' choice of actions. Behavior according to the norm is denoted as $a^N \in A$. There are two type of dynamic that may occur with respect to the norm. The first one is that what is consider a behavior according to the norm i.e., the honest behavior, change over time. The second is that the attitude of individuals with respect towards the norm itself may change over time. Note also that it is possible that there are different norms of behavior in the R group and in the P groups.

That is, in each society there is a different interpretation of an honest behavior. The two groups may have also a different attitude towards the norm which may be important among individuals in one group and not for individuals in the other group. Our focus however is not on having different social norms in groups R and P, that is the definition of an honest and fair behavior is common to both groups but the groups may differ in the importance they assign to this social norm. That is, the strength of the social norm may be different in the two groups.

Individuals do not have to comply with the social norm and may choose to deviate from it (i.e., deviate from what is considered as an honest behavior). When honest behavior maximize individuals' payoff then there is no conflict between but we consider situations in which individuals have financial gains from deviating from the actions prescribed by the social norms. We let the financial gains from such a deviation be given by $b^R = Max_{a \in A} \pi^R(a) - \pi(a^N)$ and $b^P = Max_{a \in A} \pi^P(a) - \pi(a^N)$. That is, if an individual choose to deviate from a behavior according to the norm she would choose to maximize her gains. We further assume that $b^R > b^P$ that is, individuals from type R gains more from deviation than individuals of type P. Note that we assume that there is no interaction between the individuals in this society and the gains of one individual from her own action does not depend on the choice of actions of other individuals.

We assume that individuals "suffer" from deviating from the behavior prescribed by the social norms i.e., from being dishonest. We assume that there is a social punishment imposed on individuals that deviate from the norm. This social punishment may be however different for the two groups of individuals; R and P. In this section we focus on observable actions and on the punishment imposed on deviating individual by

other members of the group that observe her dishonest deviation and impose a social punishment that may take different social forms. It is possible that individuals suffer from behaving dishonestly or against the social norm simply because such actions are against their beliefs about themselves and the norms they believe in. The punishment in this case is self-inflicting. Individuals may feel bad with themselves when they are dishonest. This type of social punishment is an important aspect of social punishment but we will discuss it in the next section that focus on unobservable actions.

Let us start by considering the observable action. We assume that the social costs of deviating from the behavior prescribed by the norm is given by $D(\alpha(H), T, \phi_i,)$ where T is the strength of the social norm and ϕ_i is the social concern of individual i. We assume that individuals are heterogeneous with respect to their social concerns. We denote the individual's type as ϕ_i. An individual of type ϕ_i=0 is not concerned with the social implications of his actions. A higher ϕ_i implies higher social concerns. We let the distribution of ϕ_i be $G_R(\phi)$ for the R type individuals an $G_P(\phi)$ for the P type individuals. Both distribution have the support of $\phi \in [\bar{\phi}, \underline{\phi}]$. We assume that the social costs of deviation is a function of the history of events H and we let $\alpha(H)$ be a shift variable.[7]

Not all the social norms are of the same strength. We denote the strength of the social norm by T and assume that it is commonly accepted and known by all members of the society. The meaning of having a stronger social norm relates primarily to the cost of deviating from the norm. We assume that the strength of the norm may be different in the

[7] For simplicity we do not index the history by t as we do not present an explicitly dynamic model. But the model can be easily extended to a fully dynamic model.

two social groups. We therefore let T^R be the strength of the norm for people in group R while T^P is the strength for individuals in group *P*.

Deviation from the social norm would occur only when the benefits from deviation are greater than the costs of deviation, i.e., individual *i* from group R will deviate from the norm whenever $b^R \geq D(\alpha, \phi_i, T^R)$.

We assume that the strength of the social norm is endogenously determined by the percentage of people that follow it.[8] When people deviate from a social norm they indirectly weaken it. We do not model the underlying social interaction process but we simply assume that the strength of a social norm is a decreasing function of the percentage of individuals that violate it.

We let q^R be the percentage of people of type *R* that deviate from the observable social norm. q^P is analogously defined for individuals of type *P*. The strength of the social norm for the individual of type *R* would be $T^R(q^R, q^P)$ where $T^R(\cdot)$ is declining in both arguments. The strength of the norm for individuals of type P is similarly defined.

The function $T^R(q^R, q^P)$ is a reflection of the social integration between the two groups of individuals. Whenever $T^R(q^R, q^P)$ is not affected by q^P and $T^P(q^P, q^R)$ is not affected by q^R then we would say that there is a social segregation between the two groups. When the strength of the norm is only a function of the percentage of deviators from the entire population regardless of their group affiliation then we will refer to such a case as social integration.[9]

[8] For an Anthropological aspect of this property see also Fessler and Navarrete (2003).
[9] Clearly there are other aspect of social integration which is beyond the focus of our analysis.

Definition 1: (social norm system) We denote by $\{T^{R*}, T^{P*}, q^{R*}, q^{P*}\}$ as social norm system whenever:

(T1) - $T^{R*} = T^{R}(q^{R*}, q^{P*})$ and $T^{P*} = T^{P}(q^{P*}, q^{R*})$. That is, the strength of the social norm for the two groups of individuals are consistent with the number of individuals that choose to follow the norm.

(T2) - $q^{R*} = \int_{\{\phi | b^{R} \geq D(\alpha, \phi, T^{R*})\}} g^{R}(\phi)\, d\phi$ is the percentage of individuals of type R that actually deviate from the social norm. For these individuals the private benefits from deviation is above the social punishment i.e., $b^{R} \geq D(\phi, T^{R*})$.

(T3) Similar condition holds for individuals in group P.

In order to consider the stability of a social norm, we define a dynamic adjustment process as follows: Starting from any $(q^{R,1}, q^{P,1})$, the corresponding strength of the social norm in the two groups $T^{R,1} \equiv T(q^{R,1}, q^{P,1})$ and $T^{P,1} \equiv T(q^{P,1}, q^{R,1})$. Given $(T^{R,1}, T^{P,1})$ we can find the number of individuals that deviate from the social norm from each group, $q\,(T^{1})$. The starting point in the second iteration would be $(q^{R,2}, q^{P,2}) \equiv (q^{R}(T^{R1}), q^{P}(T^{P1}))$. We can now define $T^{2} = T(q^{R,2}, q^{P,2})$ as the strength of the norm at the second iteration. For this T^{2} we can define the number of individuals that deviate from the social norms from each group. We can proceed in the same manner to define the dynamic adjustment sequence $\{T^{k}(q^{R,k-1}, q^{P,k-1}); (q^{R,k}(T^{k-1}), q^{P,k}(T^{k-1}))\}$.

Definition 2: A **Stable Social norm system** is a social norm that is characterized by $\{T^*, q^*\}$ which satisfies (T1) - (T3) and has the following property: For every (q^R, q^P) in the ε - neighborhood of $(q^{R,*}, q^{P,*})$, the dynamic adjustment process converges to $(q^{R,*}, q^{P,*})$.

The model so far does not have any explicit assumptions about the differences between the two groups. The only explicit assumption that has not been used so far is that individuals in the R group may gain more from deviation. This assumption does not directly imply that the R type individuals will deviate more. The behavior of individuals as well as the strength of the norm in each group is affected by the distribution of the social attitude of the individuals in this group and the shape of the $T^P(q^P, q^R)$ function and the social punishment function.

2.2 A linear example: single group

In order to clarify the concept of stable social norm let's consider an example with one group of individual, one norm, and let's assume linear function such that:

- $D(\alpha, \phi, T) = \delta T \phi$ is the cost of deviating from a social norm; $\delta > 0$.
- $T(q) = \beta(1-q)$ is the strength of the norm.
- $G(\phi)$ = the distribution of types in the population, assumed to be uniformly distributed on [0,1].
- The benefit from deviating from the social norm is b.

Consider the behavior of an individual of type ϕ and when the strength of the social norm is T. The individual will violate the social norm whenever the benefit from doing so is greater than $D(\alpha, \phi, T)$, i.e., whenever $b \geq \delta T \phi$.

Since the cost of deviating is increasing in ϕ, there is a threshold $\phi_c(T,b,q)$ such that only individuals of type $\phi \leq \phi_c(T,b,q)$ will deviate. Using (1), ϕ_c is defined as follows:

$$(2) \qquad \varphi_c(T,b,q) \equiv Min\left\{\frac{b}{\delta T}, 1\right\}.$$

The strength of the social norm is endogenously determined by the proportion of the population that deviate from it. Letting ϕ_c be the proportion of individuals that deviate from the social norm. $T(\phi_c)$, the strength of the social norm, is given by:

$$(3) \qquad T(\phi_c) = \beta\,(1-\phi_c)\,.$$

An individual of type ϕ=0 will always deviate from the social norm as such an individual does not suffer from any costs associated with violating the social norm. The presence of individuals of this type implies a setting in which there is always some proportion of the population that violates the social norm.[10]

Our definition of a social norm is therefore a couple (T, ϕ_c) that satisfies equations (2) and (3). We depict these two conditions in a $(T \times \phi_c)$ space (see Figure 1). Condition (2) describes the percentage of individuals that deviate from the norm as a function of T (the social norm's strength) and it is a convexly declining while condition (3) describes

[10] Whenever there are fixed costs of deviation (independent of the type) or when the distribution of ϕ is such that $\phi > \phi_{\min} > 0$, we may obtain stable taboos that no one considers violating.

the strength of the social norm as a function of the percentage of people that consider deviation, ϕ_c and it is a linearly declining line.

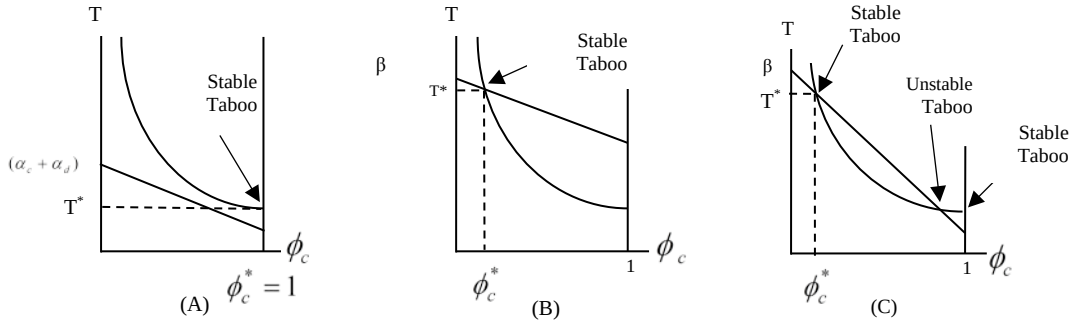

Figure 1: Stable and unstable social norms in the simple setting.

Three possible scenarios are depicted in Figure 1:

Case (A): When there is no intersection between conditions (2) and (3), the only stable solution is (ϕ_c^*=1), i.e., a social norm that all individuals deviate from. Note that we do not characterize this situation as "no social norm". But a situation with a social norm that is sufficiently weak such that all individuals break it but yet they would feel uncomfortable doing it.

Case (B): There is only one intersection between conditions (2) and (3). This point, denoted as (T^*, ϕ_c^*), is a stable social norm.[11] In terms of the dynamic adjustment process, the curved line describes the adjustment function $\phi_c^t(T^{t-1})$ while the straight line describes $T^t(\phi_c^{t-1})$. Suppose that at period t, $\phi_c^t > \phi_c^*$. Using the dynamic adjustment process we can

[11] Observe that the point ϕ_c=1 is not a stable social norm in this case.

define $T^{t+1}(\phi_c^t)$ and to obtain that $\phi_c^{t+2}(T^{t+1}(\phi_c^t)) < \phi_c^t$, with the adjustment process converging to (T^*, ϕ_c^*).

Case (C): There are two intersections between conditions (2) and (3). The intersection on the left has the same properties as the intersection in case (B) and therefore defines a stable social norm; the second intersection is not a stable norm. The point ϕ_c=1 has the same properties as described in case (A) and defines a second stable social norm.

2.3 The Effect of Greater Private Benefits.

Norms change over time; some become stronger while others disappear. Part of this process is clearly a result of social and demographic changes. But norms may also change as a result of variations in the distribution of private benefits. New inventions and ideas as well as new opportunities may lead to different distribution of private benefits. At the same time it is possible that the changes of the economy are such that a dishonest behavior may entail greater private benefits. Having a higher *b* affects the incentives available to individuals should they deviate from the social norm. Such deviations imply a weaker norm, which in turn encourages further deviations.

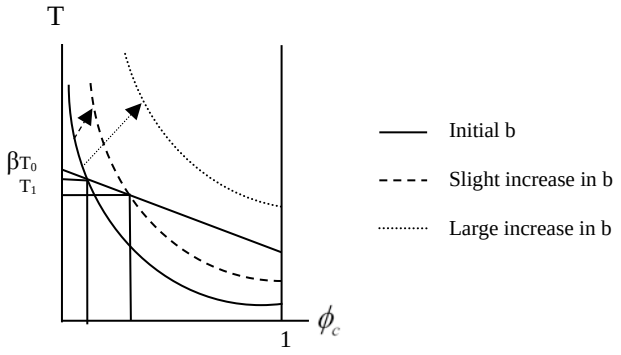

Figure 2: Effect of increasing b on stable social norm.

The effect of a higher b is described in Figure 2. Changing b does not affect condition (3) as it describes the strength of the social norm as a function of individual behavior. Condition (2) describes the incentives to deviate as a function of the norm's strength. These incentives increase with the private benefits gained from deviation. A higher b implies that the intersection points between the two curves shift to the right, which implies a weaker social norm as more people deviate from it.

Weakening the social norm is not necessarily a continuous process. There is a critical level of b, denoted as $\hat{b}$, such that whenever $b > \hat{b}$, condition (2) will be above condition (3). We conclude the following:

Proposition 1: A higher b (potential private benefit) implies an erosion of the social norm's strength with more deviation from it (a higher ϕ_c). The process of taboo erosion is not necessarily continuous. When q is sufficiently high, a small increase of b may eradicate the social norm.

Proof: See the Appendix.

Coming back to our setting with two groups R and P there is interdependence between the groups due to the way the strength of the norm is determined. We assume that a deviation by individuals reduce the strength of the norm. Thus when there is an increase in the private benefits only for one group of individuals, let's say in b^R then more individual of type R deviate from the norm which reduce the strength of the norm motivating individuals of type P to deviate as well.

2.3 The effect of crisis

So far we consider changes of the strength of norms that are derived either by the dynamic adjustment process itself by which the strength of the norm is affected by the number of individuals that violate it or by an exogenous change of behavior that is derived from an increase (or a decrease) of the private benefits from deviation. The next step would be to consider changes of the strength of the norm due to an exogenous shock. Crisis, whether economic or political, may trigger individuals in a society to reconsider the importance of norms in their society.

Crisis and norm will be interdependent in our model. We will first assume that the behavior of individual will affect the occurrence of crisis. The next step would be to discuss the effect of having crisis on the strength of the norms themselves.

Assumption 1: A higher percentage of deviators (e.g., higher q^R, q^p) imply a higher probability of having crisis and also having a more "severe" crisis – with a higher overall damage to individuals of the two groups. We further assume that q^R has a greater effect on the occurrence and the severity of the crisis than q^P.

The next question would be the effect of having a crisis on the stable social norm. In terms of our model we can think about different possible effects. Since behavior is observable, the crisis does not convey any information about the behavior of individuals as the behavior is directly observed. For this assumption to be correct we need to assume that when behavior is observed people know the exact q^R, q^p. This assumption does not necessarily hold. People may observe the behavior of other individuals but it is not clear that they have an exact perception about the aggregate behavior in their society. In this

case the occurrence of a crisis may provide relevant information about the aggregate behavior of other individuals. We will deal with this effect when we discuss unobservable actions and assume in this section that crisis does not provide any information regarding the behavior of other individuals.

But even when crisis does not provide additional information the occurrence of crisis may change the cost of deviation from the social norm. Crisis may make people "angry" about the collective effect of deviating from the social norm. In particular people that choose not to deviate may be upset when a crisis occurs. In terms of our model the crisis change, H, the history of events and consequently may result in a higher α. The cost of deviation given by $D(\alpha(H), T, \phi_i)$ will go up for both group of individuals.

Proposition 2: When a crisis leads to higher costs of deviation from the norm (a higher α) then: (i) it induce more compliance with the norm by both groups of individuals. (ii) a stronger norm

Proof: See the Appendix.

3. Social norms and Crisis: Unobservable Actions

We now turn to discuss the case in which actions are not observable. We need to modify our benchmark model of stable social norms incorporating the fact that individuals' behavior is not observed and therefore cannot be punished. If we allow only social punishment for observable actions then whenever actions are not observed individuals will always deviate. If many individuals would deviate then the strength of the social norm would deteriorate in the manner described in the previous section.

But social punishment can be also self-inflicted (see also Benabou and Tirole, 2004). Adopting an identity implies accepting the social norms associated with this identity. The desire to maintain an identity and to view oneself as a moral person as defined by one's identity is an important consideration that defines the self-inflicted cost of deviating from the norm. As Haidt et al. (1997) and Daniel M.T. Fessler and Carlos David Navarrete (2003) argue, these costs may involve negative emotions such as fear or disgust. That is, even when actions are not observable and therefore there is no social punishment individuals may punish themselves from deviating from the norm. For example individuals have a self-image of being honest and fair and acting in contradiction with this self-image create some discomfort or disappointment that they would try to avoid. Thus even when actions are not observable there is still some type of punishment that police the player actions.

But when actions are not observable players do not know the aggregate behavior in their society. That is, players do not observe q^R, q^p but may have beliefs about these values. Clearly one can impose rational expectation setup in which individuals know the distribution of social concerns and can perfectly predict the aggregate behavior. In this setup of course having a crisis would not provide any information about the behavior of individuals in this society. But I am not sure that this is the appropriate assumption for this model. Assuming that people are aware of the distribution of social concerns imply that individuals need to know all too well the members of their society and this would be a strong assumption. So in this type of setting as a result of a crisis individuals may update their beliefs about the behavior of other people in their society. Clearly the question is what the shape of such updating is. Does it depend on the occurrence of a

single crisis or on the history of crisis which includes their frequency and severity? On the other hand having a crisis is always a bad signal on the behavior of individuals. We will therefore assume a very simplistic updating function that captures this fact.

Assumption 2: When behavior is not observable individual have a simplified updating rule regarding the actions chosen by other individuals. Specifically, the occurrence crisis makes individuals believe that a largest percentage of individuals deviate from the social norm.

Thus the above assumption implies that having a crisis change the perception of individuals regarding q^R, q^p. These perceptions affect the strength of the norm and the incentives that individual have to violate it. We therefore can conclude that:

Proposition 3: When actions are not observable having a crisis induces a weaker social norm ad having more individuals that deviate from the norm.

We therefore have in our setting two conflicting effects. On the one hand when having a crisis leads to anger that is translated to higher costs of deviation from the norm, it induces more compliance with the norm. On the other hand when having a crisis has a learning aspect by which individuals learn about the behavior of other individuals then having a crisis weaken the social norm inducing individuals to deviate from the norm. In order to illustrate the two effects we distinguished between observable action and un-observable actions. In many daily activities actions are partially observable. Either they are observable only by a subset of the individuals or there is a probability that the actions would be observable. For all these actions we have the two effects that we discussed above. On the one hand the crisis makes people react more harshly towards deviators as

they have just realized the cost of the crisis. While on the other hand the crisis indicates that many individuals deviate from the norm and may be the norm is not as strong as individuals thought it is. This effect induces more individuals to deviate from the norm. Clearly the overall effect depends on the balance between these two effects.

Concluding Comments

There is an extensive literature trying to explain the last economic crisis. As a result of this crisis we have new economic and financial regulation and different type of economic policies that try to revert the economic implications of this crisis. But as any crisis the question is how this crisis and the different economic policies that followed it have affected our societies, the norms in this societies and the importance that individuals assign to these norms. If the perception of individuals is that the economic crisis occurred as a result of a corrupt, dishonest behavior of some members of the society then the question is what is the effect of the crisis on the social norms of honest and fair behavior? Do people behave more (or less) honestly or cooperatively as a result of the last economic crisis or have affected our behavior? This is clearly an important and interesting empirical question but raising this question requires some better understanding on the dynamics of social norms and social preferences and in particular on the effect of exogenous shocks in the form of crises on these characteristics of each society.

Our paper focused on the effect of crisis on the way individuals perceived the social norms and their willingness to follow these norms. We assumed that the strength of the norms is determined endogenously as a result of human behavior. But it is possible to extend the discussion and consider changes of the norms themselves. After all we live in

a dynamic society with changing behavioral norm, cultural norm and ethical norms. What is considered in one period as an acceptable, honest or fair behavior may be considered as an "unacceptable" behavior in a different period.

One of the key assumptions in our setup is that the distribution of the individuals' social attitude is exogenous and not affected by the interaction in the market, the behavior of individuals and the history of crises in the economy. One can, in principal, generalize the setup and endogenize also individuals' social attitude. For example one can embedded our setup into an evolutionary model in which the social attitude of individuals is determined endogenously as a result of some evolutionary dynamics.

One can also ask the more general question whether crises affect social preferences. For example, do wars or economic crises affect social preferences directly not through their effect on social norms. Clearly such an effect is possible but it would be very difficult to distinguish the direct effect on preferences and the more indirect effect through norms of behavior. In particular intuition suggests that there is no general answer for this question. For example one can think about a political crisis that will make people more cooperative and more companionate about other individuals in their group but one can clearly have the opposite effect depending on the nature and the implication of the crisis.

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