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Master Complémentaire in International and Development Economics

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**SOCIAL NORMS
AND COLLECTIVE ACTION
IN ECUADORIAN ANDES**

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Pablo.

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1 INTRODUCTION

The task of explaining social phenomena is complex. A single discipline can not describe how individuals behave, what determines society's structures and how individuals and communities change. One interesting characteristic of Economics evolution is the adoption of some viewpoints provided by Sociology and Anthropology in theoretical frameworks that has enhanced knowledge.¹ Thus, Economics is providing accurate explanations about the behaviour of individuals in communities and also how those communities change. For instance, Basu, Jones and Schlicht (1987) argue that in the short term, non economic variables –institutions- are given and individuals take into account those constraints when making decisions; however, in the long run what shapes those institutions is the behaviour of individuals.

Social norms are part of those constraints that individuals consider when they make rational decisions. Thus, the study of social norms has received a renewed interest of economists due to the fact that they can help to explain and understand how individuals conduct themselves under different environments. One interesting finding in Economics is that certain social norms help to solve some economic problems such as those derived from collective action or lack of markets.

Nevertheless, social norms modify over time as a result of driven forces that alter values in communities. For instance, economic development can trigger those changes by expanding markets or increasing the presence of the State inside communities transforming ancient beliefs or customs. The final effect of the latter could be the elimination of social norms and trough which the loss of a useful arrangement to solve the kind of problems aforementioned.

Thus, the aim of this paper attempts to contribute to this new literature in Economics by providing some examples of the role performed by social norms

¹ Kaushik Basu (1986: page 259) emphasizes that by “we [Economists] can accommodate in our models concepts and results which have generally been left to the charge of other social scientists”.

to solve collective action problems and to sketch how economic development impacts on those norms.

This paper is divided into four sections. Firstly, it will offer a brief overview of concepts and the evolution of economic literature regarding social norms, collective action, their relationships, and the effect of economic development on communities' customs. Secondly, a set of examples where social norms help to accomplish collective action problems will be drawn with reference to the Andean Region in Ecuador. These examples rely on several anthropological and sociological studies in this field. Then, an economic argument about the social norms will be provided based on those studies. Thirdly, it will explain the effects that economic development has caused on social patterns of Andean communities in Ecuador. Particularly, how collective action has been modified by the economic development. Finally, a conclusion and a remark about further studies will be point out.

2 CONSIDERATIONS

“The existence of social norms is one of the big unsolved in social cognitive science. Although no other concept is invoked more frequently in the social sciences, we still know little about how social norms are formed, the forces determining their content, and the cognitive and emotional requirements that enable a species to establish and enforce social norms”.

Fehr and Fischbacher, 2004.

The study of social sciences is complex. Many factors influence human beings' decisions so that social sciences need to be linked in order to provide better explanations about human behaviour. Elster (1989-a) argues that people behave in different ways even when the social environment that they face on is similar. He mentions that the only way to provide a good explanation about these kinds of facts is to merge the key elements of social sciences. Economics, Sociology, Anthropology are complementary. For instance, consider the two following statements:

- “If most others cooperate, I too should do my share, but if they don’t I have no obligation to do so.
- If most others cooperate, there is no need for me to do so. If few others cooperate, my obligation to so will be stronger” (Elster, 1989-a: page 9).

To understand these statements, it is necessary to use rational choice, social norms and collective action. Each concept comes from different social sciences. This part tries to sketch briefly the relationships between these concepts.

Thus, this segment is separated into four topics. The first one will provide a definition of social norms used in economics. Then, an empirical study about the presence of social norms in economics transactions will be summarized. The latter intention is to emphasize the role that social norms could play to solve problems about enforcement mechanisms among economic agents. After all, a classification about the social norms used in Andean communities will be given. The second part will offer an explanation about collective action problems and the difficulties that arise in this kind of problems. The third part will link social norms to collective action. Finally, there will be a discussion about the change in social norms and how the economic development can affect those rules by summarizing an example about the system of caste in India.

2.1. Social Norms

Social norms impose standards to individuals about how to behave in different settings since those rules are based on common beliefs within a group of people. Thus, if a person does not follow what the rule says, she will receive a social punishment (Fehr and Fischbacher, 2004). This implication has a direct effect for modelling individuals’ behaviour since social norms entail constraints to human beings.

One example of social norm is the Hindu rule of marriage which says that people can only get married inside the same caste. Although this rule yields a

polarized society, people obey the custom (Akerlof 1976).² Another example is the use of hiring rules by landlords in less developed economies. "Landlords offer low wages to workers. If they do not accept, landlords will assure that a third person will refuse to trade with the workers. Thus, poor workers have to work. The other alternative is starvation" (Basu 1986: page 268).

Nevertheless, not all social norms convey bad outcomes, recent studies has demonstrated some positive impacts of social norms. For instance, Platteau and Baland (1996) show how social norms could avoid the problem of the commons. In the same line, Fafchamps and Lund (2003) argue that networks share their risk of income fluctuations by the implementation of quasi-credit schemes based on social norms of reciprocity.

So far, only examples of social norms have been provided. Thus, it is interesting to define social norms and give a classification of them before to advance more.

2.1.1. Definition

Lewis points out that "Social Norms are customary rules of behaviour that coordinate our interactions with others" (Lewis -1969- cited by Young 2008: page 1)³. However, this definition mixes norms with conventions which according to Coleman (1990) are different. This author says that norms are enforced by sanctions on people who do not pursue them, while a convention is only a rule of behaviour that is followed because others also go after it in a sort of coordination arrangement or motive. In addition, Elster (1989-b) mentions that in order for a norm to be social, and not only followed by one family or inside a club⁴, it is necessary that people in the same community follow the norm and that they approve or disapprove the norm. Therefore, people who do not follow the social norm receive a punishment in a form of social pressure or reputation (Kandori 1992). As a consequence, social norms are self-enforced and they "impose uniformity of behaviour within a given social group" (Young 2008: page 1).

² Akerlof elaborates a model where the social system of caste is respected albeit it is no Pareto-optimal.

³ In New Palgrave Dictionary of Economics, Second Edition, forthcoming.

⁴ These can be defined as habits or customs.

One part of social norms is the sanction on people who do not follow the rule. This sanction is a credible threat that makes the social norm be respected and drives self-enforcement. In the next part, an example about how self-enforcement works will be provided.

2.1.2. Enforceability

Greif (1989) in his seminal paper about The Maghribi Traders' Coalition in the 11th century demonstrates how a social norm⁵ created community enforceability by a reputational punishment effect. The storyline is as follows: The Maghribians were the name given by the Muslims to the Jewish traders who settled in North Africa and conducted business along the Mediterranean basins. Considering the difficulties to trade, mainly because of the large extension that covered the territories under control of the Fatimid Caliphate⁶ and uncertainties that existed in the markets due to changes in prices and duration of sea voyages, among others, it was expected that little trade would have taken place. However, historical documents show that Maghribians traded and extensively. In order to do business along the vast territory, these merchants hired agents who travelled with the goods, and also decided important terms of the transaction such as time to deliver, prices and buyers. Clearly a commitment problem or moral hazard problem arose insofar as the agents managed money that did not belong to them, thus having incentives to misbehave and cheat on merchants. Rational thinking calls to mind that merchants knowing that agents could misbehave after deliver their capital would not hire them and as a result no trade would have taken place. Nevertheless, an informal mechanism avoided this problem. Maghribi traders formed a network where they shared key business information such as prices and market conditions. This allowed them to reduce information asymmetries and determine whether or not an agent was deceiving them. Moreover, merchants discouraged agents' opportunist behaviour by paying high wages and conditioning future employment to previous records. Thus, if an agent misbehaved, he was ostracized and no

⁵ Greif (1993) defines it as an economic institution.

⁶ Currently Spain, Portugal, Morocco, Algeria, Tunisia, Libya, Egypt, and Turkey.

merchant would hire him in a sort of collective punishment that ruined agents' reputation.

The fear to be ostracized was enough to ensure that agents did not misbehave. This is an example of how social norms are self-enforced.⁷ In addition, the social norms used by the traders' coalition were based in cooperation and retribution. In the next section, a classification of them will be offered.

2.1.3. Classification

As each community has its own social norms regarding different kind of situations, listing all social norms is a never-ending task. Yet, Elster (1989-b) in his paper about Social Norms and Economic Theory, consolidates them according to their purpose as follows: consumption, contrary to nature, regulating the use of money, reciprocity, retribution, work, cooperation and distribution. For the purpose of this paper, norms of reciprocity, retribution and cooperation are the most important. Thus, this author says that the norms of reciprocity are those that:

“enjoin us to return favors done to us by others (Gouldner,1960). Gift-giving is often regulated by these norms. There may not be an unconditional norm of giving Christmas presents to a first cousin, but once the cousin begins to give me a gift I am under an obligation to return it” (Elster 1989-b: page 101).

norms of retribution are defined as those:

“enjoin us to return harms done to us by others. Rules regulating revenge are often highly elaborate (Hasluck, 1954; Boehm, 1984; Miller, forthcoming)” (Elster 1989-b: page 101).

and norms of cooperation:

“There are many outcome-oriented maxims of cooperation. A utilitarian, for instance, would cooperate if and only if his contribution increases the average utility of the members in the group. There are also, however, non-outcome

⁷ From a theoretical point of view, read Kantori (1992) who says that the Folk Theorem could be applied to small communities where there is a perfect flow of information in order to understand how enforcement works.

oriented norms of cooperation. One is what one may call "everyday Kantianism:" cooperate if and only if it would be better for all if all cooperated than if nobody did. Another is a "norm of fairness:" cooperate if and only if most other people cooperate. Among the phenomena based on norms of cooperation one may cite voting (Barry, 1979) and tax compliance (Laurin, 1986)" (Elster 1989-b: page 101).

2.2. Collective action and Rational Choice

"Collective action arises when the efforts of two or more individuals are needed to accomplish an outcome" (Sandler 1992: page 1). However, it is not always the case that the positive result could be realized, since rational agents do not cooperate in different circumstances. Even in cases where the final result of cooperation would make them better off, there is scope for a lack of mutual support (*ibid*). The premise behind this argument is the existence of free riding behaviour, a concept linked to rational choice. Suppose that in a society a collective or public good is needed so that people have to cooperate in order to build it up. By definition public goods have two basic characteristics: non excludability and non rivalry in consumption. The former means that once the good is provided, it is not possible to exclude any person from enjoying it. The latter denotes that one individual's consumption does not reduce the good's availability for another. Thus, people behave in an opportunistic manner when they do not cooperate by thinking that others would cooperate to purchase collective good and then they can use it. As a result, in the aggregate, the collective good is never supplied because there are not buyers and population is worse off (Hindriks and Myles 2004). Generally, this kind of problem is represented by the Prisoner's Dilemma game and this statement is named zero contribution thesis (Ostrom 2000).

Thus, to avoid this problem, cooperation is needed. However, to sustain it is difficult when the action only takes place once, when information about the members is lacking, and when the number of members is large (North 1991: page 97).

Taking into account the latter predictions of human behaviour, a question arises: How to enforce cooperation inside a community to make its members

contribute to build up the public good? Olson in his 1965-popular-book emphasizes the role that the institution design (social norms) could play to overcome that problem.⁸

2.3. Collective Action and Social Norms

Ostrom (2000) says that people owe a “propensity to follow a norm of reciprocity and to be willing to restrict their own use of a common pool resource⁹ so long as almost everyone reciprocates” (Ibid: page 149). Thus, people who want to achieve a goal can form a club and join it. This action by itself enhances norms of reciprocity between club members. In addition, those norms can be improved by setting a punishment scheme that penalizes those who do not cooperate.¹⁰

Therefore, when contrasting the definition of social norms and the main features to overcome collective action problems, there is a match between them. Thus, social norms of cooperation, retribution and reciprocity can draw mechanisms to enhance cooperation and through which facilitate the emergence and the persistence of a public good provision. In fact, “a social norm can work as well at generating cooperative behaviour as an externally imposed set of rules and system of monitoring and sanctioning” (Ibid: page 147).

Bandiera, Baranka and Rasul (2005) synthesize the most important aspects about the key determinants that promote institutions enhancing cooperation inside communities. They say that “several field studies indicate that successful communities typically exhibit well-defined rules, the ability to monitor resource extraction and to punish deviators, the existence of a mechanism for conflict resolution and of a forum for discussions” (Ibid: page 474). Furthermore, other aspects such as the ability to communicate misbehaving and to punish deviators, homogeneity in ethnicity, religion or social class are seen as beneficial to cooperation. Clearly, social norms are behind those elements in

⁸ Olson (1965) also includes other aspects such as group size and group heterogeneity as determinants of succeeding in collective action problems.

⁹ A common pool resource can be seen as a public good.

¹⁰ Ostrom (2000) develops a theory about the design principles that governs self-organizes resources regimes.

such a manner that they can contribute to solve collective action problems efficiently.

2.4. Social Norms and change

Although social norms are part of community's culture, they can change over time, modifying also the purpose that they help to attain. For instance, a community that bases its provision of food on norms of reciprocity can experience a decline in the norm if its members are able to get secure food outside the community. Thus, the arising question is why can social norms change? The rest of this section is devoted to answer this question.

2.4.1. Equilibrium and change

From the viewpoint of game theory, social norms are seen as equilibrium points; although it could be Pareto-dominated (Elster 1989-b). Nevertheless, some social norms change from time to time. Considering that social norms are equilibrium, as by definition they provide enough incentives for members to not part from them, why do they vary and what are the causes that trigger such movements? Young (2008) suggests that there are three ways by which social norms change; "top-down influences, including official edicts and role models; bottom-up influences in which local customs and practices coalesce into norms; and lateral influences in which established norms from one type of interaction are transferred to related types of interactions". (Ibid: pages 6 and 7). Therefore, there are several forces in a community interacting at the same time and as a result they can trigger a modification in the pattern pursued by community members.¹¹ Yet the modification can be driven by exogenous forces or endogenous forces.

2.4.2. Some factors

Fehr and Fischbacher (2004) mention that the task of provide explanations of how social norms change is new in social sciences. Nevertheless, some authors have discovered evidence about some forces, particularly in cases

¹¹ Platteau (2006) summarizes in a clever manner why institutions changes from different approaches in New Institutional Economics.

where social norms help to obtain and maintain a public good. Platteau and Baland (1996) find that the erosion of authority patterns, market penetration, market development and technology can trigger changes in social norms. In addition, Elster (1989-b) argues that a great threat to reciprocity norms is migrations either outside or inside the community since the first motive causes a loss in the contribution to the public good and the second because new settlers need time to learn the social norms. Thus migrations weaken trust what is key to attain collective action.

2.4.3. Decline of Communities: an example

Munshi and Rosenzweig (2005) when studying the impact of the economic development on the system of caste in both rural and urban India say that this system facilitates economic activity by providing credit and mutual insurance among its members. Hence, the presence of this institution is explained by the fact that markets institutions are imperfect. Based on that reasoning, they argue that the persistence of this institution will last until markets perform efficiently. At a first glance, it looks like that only a replacement between two institutions would take place. However, when that substitution is not perfect, it would bring negative effects for the poorer.

The system of caste is based on the Hindu rule of marriage that says individuals have to get married inside the same caste; otherwise they are ostracized and lose all the benefits that this system provides. One of the positive aspects of the network is the possibility of obtaining a quasi-loan from another member of the caste in difficult situations with the commitment to reciprocate the action. This mechanism works well as the income level of the members are equal. However, when some members (new rich) get more and secure income, they can rely less on the traditional framework to diversify their risk. In addition, the new rich have to give more quasi-loans to members who are not able to get higher income in a sort of permanent subsidy. Thus, the new rich face a trade—off, either give permanent loans or respect the social norm avoiding the social sanction. If the new rich have enough wealth, the authors say, they have a natural propensity to defect by getting marriage outside the caste.

The authors' evidence shows that there has been an increase in the defection of the caste system triggered by the economic development in India. The direct effect of the latter is a deterioration of the system reducing the future system's capacity to provide credit and mutual insurance. This has mainly a negative impact on members who do not leave the caste and that are the poorer.

3 EXCHANGE IN THE ANDES

"The rituals, beliefs, norms and institutions for collective action associated with Andean communities are those most easily exoticised and romanticised in representations of the Andes".

Boeles and Geles, 2005: page 312.

The most vivid examples of ancient networks settled in Latin America belong to Andean Communities. These agricultural societies have been present in Venezuela, Colombia, Ecuador, Peru, Bolivia and Chile for centuries. They have developed rules and norms of reciprocity and redistribution that helped them to survive in difficult situations.¹²

Montes (1989), when referring a particular Andean community in Ecuador, says that this is a peasant society with very low and unstable sources of income. In addition, he mentions that money is not involved in most of the economic transactions but barter trade. Also, he stresses that peasants have adopted several social institutions to survive. Amidst these social arrangements are *minga* and *cambiamanos*. Without losing perspective, this characterization and the presence of these social institutions can be expanded to the rest of the Andean communities in Ecuador.

This section will show some of these social institutions existing in Andean communities in Ecuador. First, a brief summary about the historical background of those societies will be presented. The intention is to show that social norms

¹² Mayer (2001) shows how social norms of reciprocity, redistribution and cooperation work in the Peruvian Andes.

are deeply rooted inside these communities and that they have not changed at all despite some external shocks. Following that, two specific examples about how these communities use social institutions to solve problems derived from the lack of markets or collective action will be sketched.

3.1. Historical Facts¹³

There are 5 well defined historical phases concerning the situation of the indigenous people in Andes-Ecuador since the 10th century: Pre-Inca, Inca, The Spanish Conquest, Independence and the formation of the State-Nation, and the Agrarian Reform.

The first one is characterized by the presence of several tribes settled in the Highlands, the Coast and the Amazon basins and lasted until the end of 15th century. Records from this period are poor; however, the consensus is that those settlers were organized by kin relationships in tribes called *ayllu* and the gathering of those formed a *curacazgo* under the rule of a *cacique*. People belonging to *ayllus* had to work in *cacique's* land as a way of tribute. Therefore, labour was seen as the measure of value at that time¹⁴ (Salazar, 2003).

The second period began with the conquering of the previous tribes by the Inca Empire who imposed its characteristics mainly in agricultural practices and social organization. The conquest was mainly peaceful; built based on alliances. Thus, Inca Emperors changed their goods-surplus and provided governmental services to *caciques*. The latter paid those services by sending their members to work in the field of the Emperor. This interchange was based on the Andean principles of reciprocity and redistribution called *minka*¹⁵ (Regalado 2003).

Spaniards arrived in Ecuador at 1530 and conquered the main cities by 1538. They implemented a system called *Encomiendas* by which indigenous people had to work and pay taxes to the new Spanish rulers who obtained the

¹³ This part is based on “*Ecuador: Raíces del Presente*” which is available at <http://www.dlh.lahora.com.ec/paginas/historia/index.htm> coordinated by Enrique Ayala Mora and Sonia Fernández Rueda, 2003.

¹⁴ Ibid, Indigenous Societies: from Agro-Potter Regime to Inca Regime.

¹⁵ Ibid, The Incas in Ecuador.

possession of vast lands (*haciendas*). This system was based on the previous Inca regime; however, this time there was not reciprocity. Moreover, indigenous lived inside the *haciendas* maintaining its culture and ancient practices¹⁶ (Terán 2003).

This system did not change with the Independence and the Foundation of Ecuador as a State-Nation in 1830 and continued until the 1960 only that Spaniards were supplanted by the new local oligarchic families. Cities were transformed but not the rural areas where indigenous people lived. It was forbidden for them to settle in cities because of racism and discrimination. Hence, these communities remained as peasant economies where traditions were maintained.

In 1963 and 1974, the State enacted laws -Agrarian Reform- through which the landlords having more than 100 hectares of land had to give them to the indigenous people living there (Rudel 1992). Two kinds of land titles were granted: individual and communal. The former was given to each member of a rural area and the second was given to communities avoiding splitting land and reducing productivity. Even though common property resources regime entails management problems, Andean societies have cultivated that land in a collective way based on their own rules. This fact enhanced trust among them.

As it can be derived, history has played against indigenous people in Andean Ecuador; however, they have not lost their customs at all maintaining their Cosmo-vision. Thus, it is observable that some social institutions based on norms of reciprocity such as *minga* (*minka*) are still present among these communities.

3.2. Cambiamanos and Minga in the Andes: Working together to execute tasks for private or public purposes.¹⁷

The notion of reciprocity in Andean communities has been widely recognized and well documented in several anthropological studies. Mayer (2001: page

¹⁶ Ibid, The Spanish Conquest.

¹⁷ Mayer (2001) says that both institutions are also present in the Peruvian Andes.

105) points out that “reciprocity [in Andes] is the continuous, normative exchange of services and goods between known persons, in which some time must elapse between an initial prestation and its return. The negotiating process between the parties, instead of being an open discussion, is covered up by ceremonial forms of behaviour. It is a social relationship that ties an individual to other individuals, an individual to social groups, producers to producers, and producers to consumers”. From the above, it is remarkable the fact that there are two times the initial provision and its return. Therefore, when one person gives some good or service to another, it is expected to get back it. Indeed, Ferraro (2004-b: page 78) argues that “reciprocal exchanges imply delayed transactions that include a negotiation in time, a notion of duty and owing, and the moral obligation to repay what has been received”.

Two institutions that have been observed in the Andes are *cambiamanos*¹⁸ (translation: hands in exchange)¹⁹ and *minga* (Walmsley, 2001). The former consists of an interchange of labour devoted to agricultural tasks within the communities (Espinosa 1996). The latter is related to works that increase the well-being of the whole community such as constructions of roads, irrigation ditches, schools, communal houses mainly (Montes 1989, Martinez 1998).

The mechanics of “hand in exchange” is that one member of the village needing labour to harvest a field calls on other members in order to perform that job. The members go to assist with this task but expect that whoever calls them will reciprocate in the same manner in the future. Moreover, this practice is observed not only in agricultural activities but also to build houses for new couples or to organize feasts (Montes 1989, Ferraro 2004-a)²⁰. In case people misbehave by not paying what is due, a system of social sanctions takes place. For instance, Ferraro (2000) describes a situation where a couple did not compensate or reciprocate its “debt”. The community members identify this couple as very lazy to work and imposed a sanction that consisted of not

¹⁸ Ferraro (2004-a) calls this institution as “prestamos”.

¹⁹ Montes (1989) says that this institution can be studied as a labor relationship.

²⁰ Moreover Montes (1989: page 110) describes a situation where “hands in exchange” was used to rebuild a burned house. Thus, it can be interpreted that this institution also serves as an informal insurance mechanism.

allowing them to participate in communal acts where important decisions for the community were made. The level of exclusion was so high that soon the couple had to leave the community.

Following Thomas and Worrall (2000), it can be said that this transaction takes the form of balanced reciprocity with a little modification of the original concept. These authors define that kind of reciprocity as follows “[A] transaction which involve[s] a more complete reckoning of the counter obligation. There must be a tangible quid pro quo. It may be contemporaneous as in normal exchange transaction but it need not be. There will however be a firm expectation that a counter gift of approximately equal worth will be offered within some reasonable time period” (Ibid: page 5). In this case indigenous people know exactly the value of their counter obligation since one day of labour yields another day of labour in the future. The difference is that the future is not limited. Thus the discount rate of this transaction is zero.

On the other hand, the economical analysis of *minga* is different since this institution copes with public goods rather than private goods. In fact, according to the Real Spanish Dictionary the word *minga* comes from Quechua (the native language in Ecuador and Peru Andean regions) and has two meanings “meeting of friends and neighbours to perform a common task for free” and “collective agricultural task that is for free with social purposes” (Translation from Real Academy of Spanish Language).

As noted above, the practice of *minga* is widespread in the rural areas of Ecuador and it has existed since the Inca Empire (Montes 1989). In this case, communal authorities set a public goal and call upon members to do *minga* at a specific point in time. Members can not be excused as this call is viewed as a moral obligation to perform. In case of absence, authorities impose a sanction to “debtors” that is not recognized by the Ecuadorian legislation highlighting the character of an informal institution (García 2002). Indeed, people who do not fulfil the authorities’ call are considered to be delinquents in Andean communities. Thus, the rest of community members break down all relations with the unreliable members in a sort of social exclusion of the communal life. In

addition, they lose their credibility among members which implies that they can not obtain something from the community anymore. This punishment is high in these societies where the social and economic life is based on communal relationships (Ferraro 2000, Ferraro 2004-a).

The economical analysis of this institution can be represented using the Prisoner's Dilemma game where two players can choose to join the group or not and the pay off matrix is well known for the two players. Without the presence of social norms, the initial Nash-equilibrium in pure strategies is not to join the group since what is built by the community is a public good. An agent could expect that the others build the good and then to enjoy it, arising a free-ride problem. As a result, the public good is not provided. In order to avoid that free-riding behaviour, communal authorities impose a sanction that is large enough and through which there is a Pareto improvement reaching a Pareto-dominant equilibrium. Therefore, the best strategy under the social norm is to join the group since it makes people better off.

To sum up, "hands in exchange" and *minga* are social institutions used by indigenous people to solve lack of markets and collective action problem relying on social norms of reciprocity.

3.3. Building and maintaining irrigation systems: A role for Andean Communities.

Andean communities in Ecuador are settled mainly in rural areas²¹ where poverty reaches more than 61% and statistics show no improvement in the last 11 years.²² The presence of the State is weak²³ and most of the times nil resulting in a lack of infrastructure. As a result indigenous can not cover basic needs nor maintain their agricultural production.

²¹ A complete guide about the presence of the indigenous groups in Ecuador can be obtained at: <http://www.codenpe.gov.ec/swf/Nacionalidades%20y%20pueblos.swf>

²² INEC, Poverty Circular- Living Standards Measurement Survey, 2006.

²³ Boolens and Hoogeman (2002) emphasizes that Ecuadorian State can not enforce laws in rural areas regarding water rights.

Water is vital to live and also to produce; nevertheless, water infrastructure is few in rural areas that construction of canals is required. These structures implicate huge costs and taking into account the insignificant government action, communities should provide water by themselves in a collective action solution.

As it has been noted, beliefs, customs and traditions are deep-seated in Andean communities in Ecuador and the indigenous people use them as part of their daily economic life. For instance, two customary rules in this area are related to the value of labour, therefore things are measure in terms of one man daily labour instead of money, and the other is the presence of reciprocity. In a study about the importance of culture in Andean Irrigation Development, Boelens and Gelles (2005) say that the “notions of proportionally and equity is found elsewhere in the Andes” (Ibid: page 319). Moreover they have observed in an Andean community called Licto in the Province of Chimborazo that “the right to water and management decision-making is earned by those who work in the communal labour work-parties, who participate in the water users’ organisation, and who pay their dues according to collectively established contribution rates... rights cannot be purchased – they must be earned... these rights would be created during system construction and recreated and consolidated through the users’ participation in operation and maintenance” (Ibid: page 319). Following the same line, Boelens and Hoogendam (2002) find that “water users earn water rights and create collective hydraulic property by investing their labour and resources in the construction and maintenance of irrigation facilities” (cited by Boelens and Gelles (2005): page 314). Thus, social norms play an important role regarding water provision.

Before sketching the economical reasoning behind this process, it is useful to describe a basic irrigation system that operates in the Ecuadorian Andes. Thus, it is composed of a reservoir where water is accumulated and a canal that transports and distributes the liquid by using mechanical devices which need to be maintained. In addition to this physical infrastructure, governing rules about the exploit and maintenance are important parts of the irrigation system in such

a way that Beccar, Boelens and Hoogenam (2002) define an irrigation system as a collective task instead of a simple canal.

The economic argument contained in this part is that cooperation among community members is fundamental to build and maintain an irrigation system and that this cooperation is based on local norms. The construction of an irrigation system embodies a collective action problem because without it, the entire population in a community is worse off. Therefore, the construction of an irrigation system will improve the community's well being.

Knowing that the construction of an irrigation system could increase the welfare of the entire community, their members can build one of them without any problem. However, rational choice predicts that end result will be any construction unless an institution enforces the users to pay the costs equally. The reasoning is as follows: at the beginning the construction, all members would agree to share the entire construction and maintenance costs of the system. Nevertheless, one characteristic of this kind of device is that once it is build, it is very easy to use it without paying for it since costs of exclusion are very high, allowing free-riding behaviour. Thus, people thinking strategically would decide not to collaborate in the construction or maintenance but use it in the future. The latter can be represented by using the structure of the Prisoner's Dilemma game where the equilibrium reached that is not cooperate (or confess-confess) is Pareto-dominated. Hence, the canal is never built.

In order to change the equilibrium point making a Pareto-improvement movement, it is necessary that participants cooperate setting the following rules in advance:

- 1) Contributions and obligations
- 2) When to use the water
- 3) How much to take out
- 4) Sanctions

Points 2 and 3 can be summarized as rules of governing (Beccar, Boelens and Hoogenam, 2002).

The next question is how to find a solution to those rules in a group when the State can not enforce laws. Customs, traditions and norms in Andean societies give a clue about how to promote cooperation and through which to build and preserve irrigation systems. Contributions are made in daily work in *mingas* so that there is perfect information in a sense that each member knows the amount given. Rules of governing are taken collectively based on ancient community principles of the use of water described above. As a result, those rules are self-enforced. If someone misbehaves a system of sanctions is put in place. Some authors point out "in the Andean region, there have been numerous experiences with collective actions and social control penalising people for the failure to follow the established rules... resolving conflicts collectively restore cooperation" (Ibid: page 15). By exerting this mechanism in advance, free-riding behaviour is avoided strengthening the possibilities to succeed in the construction of the irrigation system.

Beccar, Boelens and Hoogenam (2002: page 1) say that in Ecuadorian Andes "most irrigation systems have been built by local users and manage their own systems under collective control and norms of their own". Therefore, it can be said that there is evidence that informal institutions based on Andean social norms of reciprocity and punishment schemes have facilitated to solve a specific collective action problem in Ecuadorian Andes.

4 ECONOMIC DEVELOPMENT AND SOCIAL NORMS

As it was mentioned above, social norms are customary rules of behaviour shared by a community that in specific cases allow overcoming problems such as lack of markets or free-riding. Therefore, external shocks can affect the arrangements used by communities to solve their economic problems. For instance, emigration could reduce norms' enforceability by diminishing cultural ties inside the community. As a consequence, the possibilities to succeed when obtaining a public good would be smaller.

Munshi and Rosenzweig (2005) argue that economic development can be a factor that modifies networks' relationships reducing the capacity of the network to solve some economic problems. This argument can be tested in Andean communities where economic development has modified the entire environment in which those communities exist and interact. Two direct effects that the economic development has caused in Ecuador are the rise in labour demand in urban areas and the increasing presence of the State in rural areas (Montes 1989). Moreover, globalization has also impacted Ecuador by increasing labour market opportunities. Thus, in the rest of the section the consequences of these facts on social norms will be analyzed.

4.1. Emigration and social norms

As a result of more labour economic opportunities, indigenous people have emigrated to cities and overseas. Each destination entails different effects on social norms. This, emigration to nearby cities allows indigenous people to come back in a sense that the cultural loss is lesser than emigration to other countries (Martínez 2004). On the other hand, Walmsley (2004) points out that international emigration destroys the social cohesion in Ecuadorian rural areas by causing a stratification process within communities that modifies the local customs and beliefs.

Platteau and Baland (1996) argue that emigration could reduce the authority level in communities since emigrants rely more on market mechanisms rather than old principles and norms. The latter is confirmed by Martínez (2004) for the Ecuadorian case since arguing that there has been a reduction in the local institutions that promotes reciprocity in the last years due to the new economic conditions. Thus, indigenous people now give more weight to personal interests rather than communal welfare. Another example about the vanished values is drawn by Ferraro (2004-a) who has observed that in some Andean communities, sanctions have been changed from moral to monetary being equal to a daily wage earned in cities. Montes (1989) mentions that labour relationships based on wages are increasing in rural areas in the last years. In addition, he finds that barter trade is being replaced by money transactions

since indigenous people receive remittances from abroad. Therefore, the ancient practice of one day of labour yields another is losing space.

Moreover, Ostrom (2000) shows that emigration could jeopardize the viability of the collective action solution since those who emigrate represent a loss in a sense that there is less contribution to obtain the public good. This statement can be tested in Ecuador with a high degree of significance. Walmsley (2004) finds that in an Ecuadorian Andean village called *Zhigzhiquín*, the majority of the members prefer to pay the economic fine instead of going to *minga* or they send workers to work in their behalf. This reduces reciprocity even more. She also mentions that the use of *cambiamanos* has reduced and that community members are more reluctant to help the others. This is embodied in the phrase "each one cares about oneself" whose use has increased in the last years. In the same vein, Boelens and Hoogeman (2002: page 9), in their study about water rights in Andean societies, mention that "migration, in which males in particular go to the cities or other countries, entails a structural change in the management of many community systems. The absence of men generates new challenges in the distribution of water rights, the solving of labour shortage for operation and maintenance, and the redefinition of irrigation and organisational roles and tasks".

All of these examples show that emigration is modifying social norms of reciprocity within the communities and reducing the effectiveness of these institutions to strengthen cooperation. As a result collective action becomes more difficult.

4.2. The State and social norms: room for a failure

Economic development in Ecuador has been driven by the oil industry since the mid of seventies. Discoveries of important oil reserves in the Amazon Forest and high oil prices have increased national revenues since that decade. This new income has allowed several governments to enhance the presence of the State in rural areas. Thus, many development projects have been elaborated and put in practice in Ecuadorian Andes (Montes 1989). The latter does not imply that a Pareto-improvement could have taken place by the mere action of

the State. In fact, public intervention has been the source of a decline in the social welfare.

Indeed, Ostrom (2000) points out that the State would distort the culture inside a community weakening social norms. Moreover, Platteau and Baland (1996) also find that the State can play a negative role in reducing the capacity of social norms to enforce the rules of governance in common property regimes. They say that national authorities could try to standardize rules to all the communities in the country without taking into account their differences jeopardizing traditional management schemes. In these cases, there is room for government failures.

Montes (1989) describes that one main feature of the new Ecuadorian development projects was the use of *minga* in order to build national infrastructure such as paved roads or bridges. However, the direct beneficiaries of these constructions were citizens living in nearby cities that did not participate in the task and not the indigenous people who performed the duties. Clearly, the interpretation given by national authorities about *minga* was wrong because this social institution is based on reciprocity. In these cases *minga* was a tax. This author concludes that these government interventions have undermined cohesion among community members.

Furthermore, Boelens and Gelles (2002) find other negative aspect of the State's intervention in water irrigations systems. They manifest that rules of governing these systems were changed, adopting the State agency point of view. Thus, the State agency designed a model of business according to its bureaucracy without taking into account the communities' cultural forms and organisation. They mention that rules of access were granted in proportion to fees paid, changing the customary rule of access that gave rights according to labour. As a result, those systems rapidly stopped working.

The Wickselian criterion about the intervention of the government says that there is government failure when the outcome with public intervention is not

Pareto-dominant relative to the action without government (Besley 2006). Thus, the intervention of the Ecuadorian State constitutes a failure in this case.

To sum up, the intervention of the Ecuadorian State has caused damage in the Andean social norms of reciprocity diminishing their capacity to attain public goals in these communities.

4.3. Welfare implications

Economic development can bring more opportunities but also it can be the source of an unbalanced growth process affecting the poorest. Munshi and Rosenzweig (2005: pages 442-443) mention that “the globalization and the forces of globalization and technological progress have resulted in a deterioration of network quality... as a consequence, those remaining in the network, particularly the poorest members, are very likely to be less well-insured against fluctuations in income.. conventional inferences about the effects of economic development on the poor, based solely on the measurement of their incomes, may overstate the pro-poor aspects of economic development”. This statement can hold also for the examples about Ecuadorian Andes aforementioned.

The evidence of the previous assertion is that rural emigration is generating income inequality in communities where the beneficiaries are those who receive remittances. However, those who rely on the community to obtain some benefits are in danger since the community capacity to provide services has reduced. Furthermore, the increasing presence of the State also causes a reduction in the welfare of the Andean communities since its intervention has diminished the provision level of public goods and has damaged trust inside community members.

These examples show how economic development can modify social norms and through which hinder the future possibilities to solve collective problem.

5 CONCLUSIONS AND FURTHER ANALYSES

Social norms help to solve some economic problems when formal institutions or complete markets are not present. In Ecuadorian Andes, indigenous people have relied on norms of reciprocity and cooperation as a strategy to overcome collective action problems or lack of markets. Among those social institutions are *Cambiamanos* (hands in exchange) and *minga*. The former can be seen as an arrangement that replace both labour and insurance markets. The latter as a device to solve the provision of public goods when there is not governmental action. These institutions are based on norms of reciprocity with a credible punishment scheme to avoid misbehave to those who do not follow the rule.

However, economic development has triggered some negative effects on these arrangements. Migration and government intervention are weakening the future capacity of Andean communities to face and solve economic problems. This could affect mainly the poorest members of the community who can not obtain the benefits provided by the economic development. Thus, poverty and inequality could be self-perpetual.

To conclude, it can be said that the examples presented in this paper rely on sociological and anthropological studies rather than providing and assessing own data. Thus, further studies could be opened in this fruitful field. Of particular interest could be for researchers and policymakers to evaluate the impact of the economic development on social norms in a quantitative way or to consider how to overcome collective action problems in an efficient manner. Thus, the idea is to find useful mechanisms to spread the benefits derived from economic development to all members. Furthermore, other studies could address how other social norms present in Andean communities have been used to solve shortages of food or lack of credits and insurance markets. The list of these mechanisms includes the existence of feast, quasi-gifts and networks among others. Andean societies are natural laboratories to study the complexities of the "Economic Development". The debate is open.

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