



# ECONOMY POLITY ENVIRONMENT

An International Peer-reviewed Journal of Social Studies

## Market Failures and Community Participation in Developing Countries

Santanu Mitra

Department of Science & Humanities, Women's Polytechnic Kolkata, India <sup>1</sup>

### ARTICLE INFO ABSTRACT

**Received:**  
**Dec 16, 2023**

**Accepted:**  
**May 16, 2023**

The paper investigates some of the causes of market failures in developing and underdeveloped countries when price mechanism fails to work efficiently or fails to function altogether. In the presence of asymmetric and incomplete information, state intervention is of little help. The article provides both empirical and experimental evidence of voluntary contributions by community members, in contradiction to predictions of theories of community participation. Closely bonded communities with repeated interactions and inside information can enforce contracts where both the market and state may fail.

**Key Words:** *community participation; experimental evidence; externality; market failure; voluntary contribution*

### Introduction

A significant part of development economics tries to explain and understand underdevelopment in terms of market failures and missing markets. Consequently, models of asymmetric information, strategic interactions and market inter-linkages, coordination failures and so on have been used to explain market equilibrium in underdeveloped economies. When markets fail or are missing, its place is taken by some other informal institution. According to Ray (1999, p 4), the story of economic underdevelopment is, in many ways, a story of how informal, imaginative institutions replace the formal constructs we are accustomed to in industrialised economies.

Market failure takes place when price mechanism fails to allocate resources efficiently, or when price mechanism fails to function altogether. Efficient functioning of markets requires complete information, existence of constant returns to scale, little or no externalities, pure competition and so on. However, such ideal conditions are rarely encountered in underdeveloped countries, which leads to inefficient functioning and to absence of markets in these countries.

Some common reasons for market failure are the presence of externalities in consumption or production, complementarities, and presence of public goods. Externality refers to the level of satisfaction, positive or negative, experienced by others in a society because of someone else's action. Under such circumstances there is a divergence between private benefits (costs) and social benefits (costs). Since marginal costs do not reflect the true social costs, there is either over production (in case of negative externalities) or under production (in case of positive externalities). Complementarities refer to a special kind of externalities in which individuals experience increased relative preference for choosing the same action as others. That is, the returns to others are increasing in the number of people taking the same action. Complementarities generally arise due to generalised increasing return.

1. Corresponding author and e-mail: Santanu Mitra; [mitrasantanufeb@gmail.com](mailto:mitrasantanufeb@gmail.com)

This may give rise to multiple equilibria and even when a Pareto-efficient solution is available, it may not be attained. The individuals do not always take the impacts of one's action on others into account; as a result, the system may get trapped in a vicious circle of inefficient solutions. Such a situation has been attributed to coordination failure among the economic agents in the system. Whether an efficient solution is attained or not depends on the expectations and beliefs of the agents on what action others will choose. If most agents expect that others will also choose to move towards the efficient solution, then they too will choose to move towards the equilibrium solution and it will indeed be attained. However, the expectations or beliefs about others' action are shaped by the information each have about others, the frequency and outcomes of past interactions and the norms upheld by that society. In the absence of information regarding each other's action, the market mechanism cannot wrest the economy out of the vicious circle.

For goods which are non-excludable and non-rival in consumption, that is Public Goods, the responsibility is on the State to provide such goods, as self-interested individuals are expected to free ride on other's efforts. In case of externalities, the standard recommendation is State intervention through imposition of taxes on negative externality producing activities and providing subsidies to activities with positive externality. Sometimes non-price instruments, like quantitative restrictions on output are recommended owing to easier implementation and certain impact.

But the problem of state intervention is asymmetric and incomplete information. Given the diversity of activities it is impossible for the State to know the details of every activity to draft a solution for each separately. At the same time, it would be inadequate to draft a uniform policy to be followed widely. Moreover, when the activities are highly scattered the cost of monitoring is also high and that in the absence of proper monitoring, enforcement of contracts would also be weak. As it is, most of the developing countries have very little funds and staff available for monitoring and enforcing rules.

Community Participation can play an important role where market and the State may fail. Such situations, as it is discussed above, arise when human interactions cannot be controlled and coordinated through designing and enforcing complete contracts or through the authority of the State. In such circumstances the community with its inside information, norms and schemes of social sanction can provide an alternative. There is much evidence of the community members coming forward and creating a good, which both the market and the State failed to provide. But before going into the evidence, a brief look into the theoretical literature on community participation or collective action is needed.

### **1. Theories on Community Participation**

According to theoretical models by Hardin (1968); Olson (1965) and non-cooperative prisoner's dilemma game, community participation may not always be forthcoming. This is specially so when there exists externalities and non-excludability. According to Hardin, for Common Property Resources (CPRs), ruin is the destination towards which all men rush, each pursuing his best interest in a society that believes in the freedom of the commons. The game of prisoner's dilemma comes to a similar conclusion. In the absence of a binding contract, each player chooses the dominant strategy to defect and there is overall defection. Here each player ignores the harm inflicted by her choice on others and ends up at a pareto-inefficient equilibrium. Olson challenges the optimism expressed in group theory that people with common interest would act together towards achieving the common target. According to Olson, if the individuals cannot be excluded from enjoying the benefits of the collective good then they will have little incentive to contribute voluntarily to the provision of the goods.

### **1.1. Empirical Evidence of Voluntary Contribution**

However, there are many empirical evidence of community participation in India (Baviskar, 1994; Chatterjee, 2007; D'silva and Nagnath, 2002; Moose, 2003; Wade, 1987) and Nepal (Bajracharya et al., 2005) which demonstrate that collective behaviour and community participation do indeed take place. Some communities have in fact been able to design and evolve stable rules towards sustained community participation. In the following paragraphs some of these collective efforts are briefly mentioned.

Baviskar (1994) describes how a group of villagers in Alirajpur district of Madhya Pradesh, India united themselves under an association (called Sangath) for several years. They were from villages Attha, Gendra and Umrath. Their common association had ensured them access to the common lands and forests and consequently, they started investing in soil and water conservation on a large scale. Even though the efforts of the villagers were not always unflagging, they slowly managed to evolve a conservation strategy which best suited them. Their success through community participation has been attributed to their organising under the Sangath and acute scarcity of forest produce around their villages.

D'silva and Nagnath (2002), describe how the villagers of Behroonguda in Andhra Pradesh, India, organised themselves to regenerate the forests around the village. In 1990 there were only scrub and brush, but now visitors go there to enjoy the Luxuriant re-growth of the forest and understand the local initiatives. The villagers not only regenerated the forests but also provided night-patrol to prevent illegal deforestation. In a joint effort with the forest department a number of offenders were booked and penalised. However, incidence of such cases has declined due to constant vigil by the villagers.

Chatterjee (2007) describes how the residents of Khatra in Bankura district of West Bengal, India raised Rs.2000 in a week to build a 53 ft. wooden bridge. The money was contributed by villagers of five or six adjoining villages and used to buy logs, bamboo, wires and so on. Thirty villagers, who had some technical knowledge, provided voluntary services in building the bridge. The bridge now connects a number of villages to the road to Khatra and Bankura town. Earlier, they had to walk thirty kilometers through a forest or cross the canal in a country boat.

Bajracharya et al., (2006) in their paper examines the effectiveness of community-based conservation on biodiversity in Annapurna Conservative Area (ACA), Nepal. Ecological assessments and social surveys undertaken both within and outside ACA, revealed significantly higher forest basal area and tree species inside ACA than outside. The mean density of cut tree stumps was significantly lower inside ACA. Social surveys also revealed that wild animal population has increased inside ACA since the inception of community based conservation.

### **2.2. Experimental Evidence of Voluntary Contribution**

As is well known, public goods are non-excludable and non-rival in consumption and as a result it is expected that voluntary contribution to provide such goods will not be forthcoming. Self-interested people will prefer to free-ride on others' efforts. To verify this prediction, the simplest game structure comprises a group of ( $n$ ) subjects who are provided with an initial endowment ( $e$ ) by the experimenter and asked to contribute ( $c_i$ ) towards a group fund from the initial endowment. The group fund thus collected is multiplied by a factor, say  $m$  ( $m > 1$ ), and divided equally among the subjects. If individuals are assumed to be self-regarding then the

dominant strategy would be to contribute nothing and by symmetry, the total contribution should be zero. The return to the  $i$ th individual is given by

$$R_i = e - c_i + m/n (c_i + \sum_{j \neq i} c_j), \text{ where } i \neq j$$

The return is linear in  $c_i$  and  $\partial R_i / \partial c_i = -1 + m/n$ , i.e.,  $\partial R_i / \partial c_i < 0$  for  $m < n$ . This implies that for a given  $\sum c_j$  the best choice for a self-interested individual would be to make no contribution. The individual should hold his endowment ( $c_i=0$ ) and enjoy a part of the contribution ( $m/n \sum c_j$ ) made by others. By symmetry, all would make the same choice and overall contribution should be zero.

So economic theory (i.e., game theory) predicts that in a public goods experiment self-interested participants would make little or no contribution as the marginal return of contribution towards the public goods is negative. But this experiment has been conducted in many countries around the world and it has been observed that in almost all the experiments i) the contribution to the common pool has ranged between 50% and 40% of the total endowment in the initial round and ii) the contribution slowly decays in successive rounds. Thus, experimental results contradict the prediction of economic theory that in public good experiments the contribution towards public goods would be low or zero.

### 3. Concluding Remarks

How and why community participation may act as an alternative when market fails and state intervention is not forthcoming in an underdeveloped economy? According to Grief (1994) the societal organisation in developing countries is collectivist as against individualist societal organisation in the developed western world. The social structure in the former is segregated in the sense that individuals interact mostly with members of a specific group, to which they belong and feel involved in the lives of other members of the group. This endogenous partition of society into small groups makes individual members dependent on the groups. This also facilitates in-group communication and economic and social collective punishment. Thus, contract enforcement is achieved through informal social and economic institutions where the groups can influence their members to comply with established norms through economic, social and moral sanctions.

On the other hand, in individualist society, the society is more integrated and there exists a vertical social structure. The dependence of an individual on any group is weakened and as a result the ability of any group to use economic, social and moral sanctions against any member is also weak. Consequently, it has led to the development of societal organization based on legal, political and (second party) economic organisation for enforcement and coordination.

Bowles and Gintis (2002) come to similar conclusions. They list three reasons why community participation should work where markets and the state may fail. According to them, interactions among the community members in a closed society are frequent and as such the probability of future interactions and retaliations are also high. Owing to frequent interaction among the members they come to know about each other's characteristics, behaviour and future plans. Moreover, communities can overcome free-rider problems through peer monitoring and punishing members who violate norms. Such monitoring has been found to be effective in overcoming incentive problems where, individual actions affecting the well-being of others are not subject to enforceable contracts.

*Acknowledgement: The author earnestly expresses his thanks to Prof. Gautam Gupta for discussion and supervision of the paper. However, the author alone is responsible for any remaining error.*

**References**

- Bajracharya, S. B., Furley, P. A., & Newton, A. C. (2006). Impacts of community-based conservation on local communities in the Annapurna Conservation Area, Nepal. *Biodiversity & Conservation*, 15, 2765-2786.
- Baviskar, A. (1994). Fate of the forest: Conservation and tribal rights. *Economic and Political Weekly*, 2493-2501.
- Bowles, S., & Gintis, H. (2002). Social capital and community governance. *The economic journal*, 112(483), F419-F436.
- Chatterjee, A. (2007), "Bridge: for people, by people", *The Telegraph*, Calcutta, 3<sup>rd</sup> October.
- D'Silva, E., & Nagnath, B. (2002). Behroonguda: A rare success story in joint forest management. *Economic and Political Weekly*, 551-557.
- Greif, A. (1994). Cultural beliefs and the organization of society: A historical and theoretical reflection on collectivist and individualist societies. *Journal of political economy*, 102(5), 912-950.
- Hardin, G. (1968). The Tragedy of the Commons. *Science*, 162, 124 -142.
- Olson, M. (1965). *The Logic of Collective Action: Public Goods and the Theory of Groups*, harvard university press.
- Ray, D. (1999). *Development Economics*, Oxford University Press, New Delhi.
- Wade, R. (1987). The management of common property resources: collective action as an alternative to privatisation or state regulation. *Cambridge journal of economics*, 11(2), 95-106.