An eclectic demystification of Operation Barga

Srinjoy Ganguly
IIM Ahmedabad
p14srinjoyg@iimahd.ernet.in

Abstract: Professed by the Left Front government as one of the cornerstones of their erstwhile regime in West Bengal, their ostentatiously pro-poor objectives have over the years elicited a fair share of attention, both positive and negative, from different sections of the Indian polity. One of the major vehicles which the Left Front employed extensively so as to ensure that the afore-mentioned objectives reach fruition was a slew of land reforms wherein they targeted the rural poor, especially the marginalized peasants, by distributing vested land and establishing 'graam panchayats' (local village/rural bodies) so as to empower one and all. In this regard, Operation Barga was one of the most prominent land reform movements to emerge from the stables of the Left government, with the core ethos of the movement being the introduction of a paradigm shift to the tenancy norms in rural West Bengal and abetting in the pecuniary emancipation of the bargadars (cultivators). The project was extremely successful and achieved an increase in the fraction of registered sharecroppers from 23% to 65% (1978 – 1990), which in turn synchronized perfectly with the proverbial renaissance in agricultural practices witnessed by that period to enhance the state's agricultural productivity immensely. These changes translated ultimately into improved human development indices for the population sample under consideration, with West Bengal bearing witness to a very minimal number of peasant starvation or suicide instances, quite unlike the other states of India. This article intends to adopt a rather discursive approach in analyzing the movement so as to eventually extract relevant policy directives that could prove to be beneficial for key decision-makers.

Keywords: Land Reforms Act, Operation Barga, bargadar, zamindar/jotedar, Nash equilibrium, Strategy Diamond, share-cropping contract.

I. Introduction

An inspection of the various views posited in the ideological debate concerning the efficacy of government intervention, in providing land access to the rural poor, does end up seeming like a self-defeating exercise. This totem especially holds true in a country like India where the agrarian economy is mired with several discursive views regarding the pertinence of the existent legal framework governing a vital economic resource like land. Historical evidence too corroborates that most of the major land reform movements across the globe have emerged in response to the outdated usufructuary practices linked to land usage. More often than not, such reforms would essentially transcend into the search for an elusive Messianic land magnate wherein his primary mandate would entail the mobilization of land in order to justify its eminence as a germane economic resource. This search stems from the fundamental justification for land reforms: an incentive for investments in goods & services where the scope for explicit, tightly bound contracts is indeed limited. Based upon these precepts, one must take cognition of the core economic rationale behind redistributive land reforms, especially in terms of a trade-off between equity and accountability professed by the same. In this regard, sharecropping professes a wonderful vista to analyze the various nuances of the principle-agent problem, seen to have had widely afflicted similar agrarian milieus, by observing the various facets of productive efficiency and distributive justice associated with such a contractual setting.

The late 1970s, marked by the ascendance of the Left Front government [1] to the throne in West Bengal, proved to be very profound period for the state as it saw the emergence of a fusillade of state-backed, pro-poor development initiatives. In a similar vein, West Bengal's iconic 1978 Land Reforms movement [2] succeeded in legally empowering the rural sharecroppers (dubbed as "bargadars") by virtue of a series of deft amendments aimed to ameliorate the dubious land tenancy norms in place at that point of time. Operation Barga [3], considered by many as one of the most successful pro-rural initiatives of the Left Front government, formed the cynosure of the Land Reforms movement. The mass-scale operation entailed a massive drive to register the names of the state's bargadars in the record of rights so as to grant them permanent and inheritable land tenure, i.e. quasi-property rights. Furthermore, the movement postulated that the sharecroppers could not be forced to vacate the land at any cost as long as they paid the landlord at least 25% of their agricultural output as rent. Thus, the extensive & proactive land reforms program, coupled with a Food for Work initiative, meant to safeguard farmers during a lean period, engendered a paradigm shift in the rural poverty levels of West Bengal. Despite the relative proliferation of rural pro-poor redistributive reforms in the post-independence phase of India's aggressive drive for development, Operation Barga enjoys a unique status as the first instance where an eradication of rural poverty levels, commensurate with the gusto of the movement, had been finally achieved. Quite expectedly, Operation Barga has, over the years, gone on to acquire 'cult status', with its subliminal impact being lauded by every faction of the Indian polity.

At the very crux of the entire gamut of land reform initiatives discussed thus far, lies the fundamental link which binds each bargadar (sharecropper) with his jotedar/zamindar (landlord): the contractual tenancy norms governing each piece of agricultural land (i.e. microeconomic unit). The most widely held view pertaining to tenancy is that it helps normalize the imperfections in the agrarian market for any factor (effort, in this case) sans land. Quite intuitively, a share-contract [4] is established to govern over all the inter-party transactions as a share would ensure that both the parties involved in the contract are key stakeholders in the success/failure of the agricultural practices taking place on that piece of land, as both the parties' key driver would be the maximization of his payoff (i.e. share in the agricultural output). This feature warrants a detailed study of the various intricacies posited by the relationship between property and agricultural productivity, backed by a quantitative perspective. One must also pay heed to the notions of "poverty" and "legal empowerment", wherein a fluid transmutation of the dynamics existing between the former and the latter served as the precursor, modus operandi and the objective of Operation Barga. A seamless understanding of these notions is imperative to study the relevance of Operation Barga, given today's starkly contrasting global landscape, in terms of the adroit strategies adopted by the relevant government institutions in driving the operation to such levels of unparalleled success. Thus, these precepts preclude an extraction of the core strategic elements of the Operation Barga in order to appreciate better the qualitative precursors pertaining to this redistributive reform. Both the qualitative and quantitative insights, thus derived, coupled with a succinct historical background of the movement, should suffice in providing holistic directives to relevant policy-makers in dealing with matters of redistributive reform against the backdrop of a modern-day agrarian economic setting.

By virtue of this paper, I wish to present an eclectic mix of analyses regarding the different facets of Operation Barga, in tandem with an establishment of a succinct historical background for the same, so as to draw suitable policy lessons from the dynamics of the framing & execution of this successful land reform movement. The rest of the paper may be divided into the following sections: **Section II** presents a literature review pertaining to West Bengal's land reforms in general and Operation Barga in particular; **Section III** intends to establish an appropriate historical background regarding the various land reform movements in West Bengal so as to aid in the appreciation of the analyses posited in the subsequent sections; **Section IV** professes a game-theoretic analysis of a revenue-sharing contract, i.e. the fundamental unit of an agrarian regime characterized by share-cropping; **Section V** intends to leverage upon Hambrick & Fredickson's Strategy Diamond framework to extract the key strategic perspectives regarding Operation Barga; and, **Section VI** finally concludes the paper.

II. Related Work

Despite the negative spill-over effects of inequitable distribution of resources receiving due acknowledgement from several quarters, a similar phenomenon occurring in the political sphere has received relatively less attention via academic literature, with the exception of [5]. The inequality alluded to, especially if backed by coercive (or, other equivalent non-economic) means, becomes conducive towards mass-scale insurrection, as discussed in [6]. Brazil and India, in particular, have borne witness to a large number of such mobilized wide-scale rebellious movements [7], wherein land institutions have had a major role to play in the emancipation of the core socio-economic fabric of each society. In this regard, the strategy adopted for affecting paradigm shifts in the existent practices via heady reform movements have far reaching consequences for productive performance, in terms of the land's productivity [8]. In fact, prolonged phases of directionless, belligerent insurrection have, as discussed in [9], proved to be grossly counterproductive and limit economic potential significantly. Thus, any such mass-scale movement should be initiated only after having established that it is based upon logically cogent precepts, contingent upon the results of a dispassionate, full-scale impact assessment taking the fragmented nature of rural factor markets [10] into account. These market imperfections ensure that rural landlords enjoy access to cheaper avenues of credit [11] while incurring lower labour costs with respect to "smaller" farmers. In this context, as evinced earlier, the primary justification for the redistribution of rural agricultural land lies in the empirically observed inverse relationship between land size and productivity [12] while the practice of sharecropping is justified by the growth in productivity it is believed to usher in by fostering a sense of 'stewardship' [13] among farmers.

Land reform has been a critical agenda for India in its post-Independence policy to bring about a speedy cessation of the rampant malpractices [14] exhibited by the collecting intermediaries (zamindar/jotedar) in the collection of rent [15], stemming from agricultural production. The first major instance of the same was the 1955 Land Reform Act [16], wherein the concept of a ceiling on land holding was first introduced [17], coupled with tenancy laws providing sitting tenants with permanent land utilization rights. This Act, despite its ostensibly noble intentions, contained within its ambit several glaring loopholes that enabled conniving landlords to work around its deficiencies so as to effectively render the Act redundant [18]. The term "personal cultivation" [19] was arguably the biggest loophole in the law as it provided landlords a potent opportunity to randomly evict tenants as per their whim and fancy and employ forces of intimidation, in tandem with the espousal of the local officials, whenever necessary given that this law exacerbated the legal vulnerability [20] of the farmers. The landslide victory of the Left Front government in the 1978 state assembly elections [21] proved to be a complete game-changer in this context as the party came on the plank of a pro-poor, pro-rural mandate. While the outright transfer of property rights to tenants was not feasible politically [22], an aggressive program to register tenants was implemented right after their ascendance to power, viz. Operation Barga [23].

As detailed in [24], the efforts associated with Operation Barga, proved to be munificent on several grounds with the positive spill-over effects extending to 4 million households. The rationale behind the corresponding surge in the rate of productivity experienced by the state is discussed in [25]. Despite not being able to singularly attribute the economic gains experienced by West Bengal during this period (51% to 63% approx.) to Operation Barga, a robust argument in favour of the linkage between the two phenomena has been presented in [26]. Several other views [28-29] point towards the correlation between positive impacts arising out of tenancy reforms and transfers of vested pieces of land (land masses over and above the ceiling set by the 1955 Land Reform Act). Tenancy reform, in particular, is popularly believed to comprise of three main value propositions to farmers: protection against uncertainty (end to random evictions [30]), transfer of appropriability (enforcement of ceilings; abolition of fixed rent contracts [31]), and, mitigation of asset specificity (provision of heritable share tenancies [32]). Based upon the views professed thus far, it is quite intuitive that the study of the various features of Operation Barga in detail would enable one develop a crisp framework [33] to analyze any mass movement leveraging share-contracts, in details.

III. A historical perspective regarding land reforms in West Bengal

Upon achieving independence, India acquired a very deferential and feudal multi-tiered agrarian structure, peopled with landlords at the helm of affairs, several layers of intermediaries, and the oppressed bargadars (peasants) at the lowest rung. Perennially afflicted by ghastly pecuniary deficits, these bargadars cultivated a substantial portion of the land belonging to entities located at higher tiers in the agrarian economy in lieu of a share of produce. The downside in this construct was that these bargadars were literally at the mercy of the landowners who had the privilege of determining each and every term of their employment at free will, without meeting any resistance whatsoever. The Indian society was slow to react to this social vice, however, owing to the confusion of attitudes and approaches (an impact of colonialism) towards the resolution of private property in the form of a private good such as land, which is relatively inelastic in supply. Indians, being alien to the concept of private property-based entrepreneurship [34], had been thus far unable to avert the complete hegemony they faced in the national arena and were meted with a string of 'false starts' [35] per se.

This genesis of the confusion, alluded to earlier, lay in the Permanent Settlement Act [36], a brainchild of Lord Cornwallis [37], wherein a difference between rent and revenue was first introduced in the incumbent agrarian setting. The Act, originally instituted by the East India Company to meet its exigent expenses, entailed an unbridled anarchic method of rent collection, through a practice popularly referred to as “Revenue Farming” [38], wherein zamindars acted as agents of the state (the British Raj) with their principle purpose being the provision of revenue to the British in lieu of unbounded rights to extract rents from the hapless bargadars. The servile meekness, characteristic of Indians in the colonial era, soon gave way to fierce patriotism with the National Movement gaining fervour in the 1930s. The movement incorporated within its memorandum the tenet of robust land reforms to abolish all forms of intermediaries plaguing the rural landscape. Owing to the proliferation of the “raiyat” system [39] in that era, the relationship between the raiyats and the ‘real’ cultivators of land became so clouded that it led to the mushrooming of a multi-layered regime of interests between various factions. While the right-wing Congress emphasized on the abolition of vile intermediaries [40], the Left Front sought the securitization of tenant rights within the garb of a revenue-sharing contract [41].

More specifically, if one was to concentrate upon the region of interest, i.e. West Bengal, then the redistributive land reforms mandate was fuelled by the Tebhaga (sharing by a third) movement. The movement was an independent campaign launched the leftist “Kisan Sabha” [42] circa 1947 to oppose the existing practice of giving up half of one’s harvest to the landlords. Although the movement met with little success, it laid a foundation for the series of protests launched in the state against the evils of the Permanent Settlement Act, initially, and the 1955 Land Reform Act (discussed in the preceding section), eventually. The emergence of several stalwarts, led by Hare Krishna Konar [43], in Bengal’s quest for rural equity abetted in setting the stage for a string of amendments to the Land Reforms Act pertaining to the state in the early 1970s. The victory of the Left Front in the 1977 elections followed by the full-fledged launch of Operation Barga formed the penultimate and final chapters in this saga of Renaissance wherein the first 3 years of the Operation alone yielded the registration of close to 1.2 million bargadars. The interesting feature that deserves mention in this context is that the land reform movements in the other parts of India, despite gaining initial ground in the Congress era, lost steam during the rule of the Janata Dal [44]. On the other hand, West Bengal and Kerala, two Left Front ruled states [45], were the only ones were land reform movements gained significant traction in terms of not only the amelioration of rural poverty but also the legal empowerment of the poor.

IV. Efficacy of the Share-Cropping Model: A quantitative analysis

In order to analyze the merits/demerits of Operation Barga, an elementary game theoretical model [46] has been considered which aims to capture, albeit within its limited scope, the multifarious transactions that may take place between the two parties involved in the contract, i.e. the landlord (landowner) and the sharecropper (tenant). The leitmotif in the model described here is quite ostensibly to endogenize the type of contractual agreement (i.e. share contract) wherein the access to a certain unmarketed resource (ex. farm supervision) is affected by making the owner(s) of that resource its residual claimant(s). Assuming that accountability would form the cornerstone of an agrarian economy, the analysis intends to posit that ceteris paribus the sharecropper’s efficiency proves to be the key deciding factor in determining the pay-offs received by both the key stakeholders. Given the changes enforced by Operation Barga, there were two possible paradigmatic shifts which could have occurred in the contractual agreement. Firstly, the securitization of the sharecropper's tenure quite intuitively implied that it gave him concrete legal power to stake a claim on his ordained share of the produce, i.e. unlike the previous scenario, the landlord could not force the sharecropper to accept a lower share by threatening to evict him. Secondly, a secure tenure meant that the sharecropper had greater incentive to work hard and maximize the land's agricultural output because he was confident of being able to reap the benefits of a higher yield. Quite intuitively, while the former would affect an increase in the sharecropper's bargaining power, the latter would make the contract more aligned to his incentive construct. Thus, the interplay of the two afore-mentioned factors would determine whether the contractual agreement would be viewed by the landlord with alacrity or anathema.

While developing the various tenets of the mathematical model aimed to capture all the nuances of the description thus far, it is assumed that the players involved operate within the boundaries of limited rationality and morality. Furthermore, each sharecropper is assumed to possess a limited amount of wealth. As mentioned earlier, ceteris paribus, the agricultural output accrued from the piece of land under cultivation is assumed to be a linear function of the effort ($E \in [0,1]$) exerted by the sharecropper, wherein the output is normalized to lie between **0** (**zero yield**) and **1** (**highest yield**). As the effort exerted by the sharecropper is an unobservable quantity, it cannot be bound by a contract. The agricultural payoffs receivable by the sharecropper in the two extreme scenarios are represented by **L** (**lower-limit payoff**) and **U** (**higher-limit payoff**), respectively. Thus, the agricultural payoff (**P(E)**) which a sharecropper can expect to receive upon having exerted effort **E** is given by Eq No (1). The cost function, pertaining to the sharecropper, for exerting an effort equal to E has been assumed to adhere to the quadratic form in order to account for the extra utility that a person would derive from his gains by virtue of work rather than simply slacking off, because $E^2 < E$, for $0 \le E \le 1$. Evidently, the one-shot contract framework is tantamount to a non-cooperative game wherein each player (landlord & sharecropper) is trying to maximize his payoff. The net payoffs received by the landlord and the sharecropper at the end of this game are thus denoted by θ_L & θ_S , respectively; and are formulated in Eq No 2 & 3, respectively. The bargaining power cap (say, β) possessed by each sharecropper has been formulated mathematically in Eq No 4. Finally, in synchrony with the norms of the land reform covenant, given a limited liability constraint (say, α) binding on each sharecropper, the constraints of the agricultural payoffs have been represented in Eq No 5.

$$P(E) = L + (U - L).E \tag{1}$$

$$\theta_L = E - P(E) \tag{2}$$

$$\theta_S = P(E) - \frac{1}{2}\mu.E^2 \tag{3}$$

$$\theta_S \ge \beta \tag{4}$$

$$L \ge -\alpha \quad \& \quad U \le 0.75 \tag{5}$$

As the share contractual model under consideration essentially represents a non-cooperative game, i.e. a scenario where each party's lone focus would be on maximizing his net payoff, we can safely assume that the sharecropper would try to maximize his payoff by appositely tuning the effort he exerts. Thus, at **E = E*,** we equate the first order differential of (3), with respect to E, to zero:

$$(U-L)-\mu.E^{*}=0$$

$$\Rightarrow \quad E^{*}=\frac{(U-L)}{\mu} \tag{6}$$

Utilizing (6) in (4) yields an alternative version of the incentive compatibility constraint (at **E***) imposed by virtue of Operation Barga as presented in Eq No (7). Similarly, the landlord's payoff at **E = E*** is stated in Eq No (8).

$$\frac{(U-L)^{2}}{2\mu}+L\geq\beta \tag{7}$$

$$\theta_{L}=\frac{(U-L)}{\mu}-\frac{(U-L)^{2}}{\mu}-L \tag{8}$$

<u>Case 1</u>: The limited liability constraint for each sharecropper binds while the bargaining power constraint does not.

In this scenario, the landlord would try to maximize his net payoff at any cost and he would do so by setting $L=-\alpha$. Therefore, in order to maximize (8), it is sufficient to equate the first order differential of (8), with respect to **(U - L),** to zero, whereby one obtains:

$$\frac{1}{\mu}-\frac{2(U-L)}{\mu}=0$$

$$\Rightarrow \quad (U-L)=\frac{1}{2} \tag{9}$$

$$\Rightarrow \quad E^{*}=\frac{1}{2\mu} \tag{10}$$

By substituting the results derived in this section in (7), one may obtain (surprisingly) a limitation constraint on the values of α & β, in Eq No 11. Such a construct would be the norm going forward in the subsequent analyses of particular nuances of the agrarian share contractual model.

$$\alpha+\beta\leq\frac{1}{8\mu} \tag{11}$$

<u>Case 2</u>: The bargaining power constraint for each sharecropper binds while the limited liability constraint does not.

Substituting the value of **L** (derived from (7)) in (8), an alternate formulation for the landlord's net payoff (at **E***) is obtained and is represented in Eq No (12). To maximize the payoff formulation thus obtained, (11) is maximized by tuning **(U-L),** i.e. finding its maxima with respect to **(U-L)**, and the results obtained subsequently are reported in Eq Nos. (13-15).

$$\theta_L = \frac{(U-L)}{\mu} - \frac{(U-L)^2}{2\mu} - \beta \qquad (12)$$

$$(U-L) = 1 \qquad (13)$$

$$\Rightarrow \quad E^* = \frac{1}{\mu} \qquad (14)$$

$$\Rightarrow \quad \alpha + \beta \geq \frac{1}{2\mu} \qquad (15)$$

<u>Case 3</u>: Both the bargaining power constraint and limited liability constraint for each sharecropper bind.

Since both the constraints bind, both (4) and (5) are tantamount to simple equalities. Thus, $L = -\alpha$, and, $(U-L) = \sqrt{2\mu.(\alpha+\beta)}$. The value of E*, and the range within which this holds, is thus represented in Eq Nos. (16-17).

$$E^* = \sqrt{\frac{2(\alpha+\beta)}{\mu}} \qquad (16)$$

$$\Rightarrow \quad \frac{1}{8\mu} \leq \alpha + \beta \leq \frac{1}{2\mu} \qquad (17)$$

At this stage, a qualitative analysis of the quantitative postulates presented thus far is warranted. Quite intuitively, a look at the mathematical results above makes it very lucid that as the outside option of a sharecropper (β) increases, the optimal effort (**E***) exerted by the sharecropper also increases. Furthermore, as exhibited in **case 1**, the sharecropper's participation constraint does not bind and he earns rents from the contractual framework. The caveat here is that the landlord, prior to the land reform movement, could at free will decide whether to provide incentives to the sharecropper or simply, extract the excess from him. A pure rent contract, as formulated in (13), would in general ensure the sharecropper's welfare and would appease the landlord too if the sharecropper was reasonably wealthy enough to guarantee a steady source of cash flow (rent) for the landlord. But the limited liability clause, as formulated in (5), renders the efficacy of such a contractual model completely ineffectual. Due to (4), the landlords are compelled to pay the sharecroppers more, despite the severe limitations in their traditional incentive structures, in the form of performance bonuses, and other such strategic pecuniary guarantees. These would, in turn, prove to be beneficial for the landlords because all these pro-sharecropper initiatives would make it easier to extract rents from a sharecropper, without compromising on the extent & quality of effort he employs. Simultaneously, the endogenous balance fostered by the share-contract will ensure that the landlord does not try to reduce the sharecropper's share beyond a certain minimum, so as to arrive at a pareto-optimal solution (tantamount to a **Nash Equilibrium** [47]) for both the parties.

V. The core strategic elements of Operation Barga

The Strategy Diamond, proposed by Hambrick & Fredickson [48], provides business professionals with an integrated way to analyze strategy cases where all the conceptual aspects associated with a strategy are considered together rather than as disparate entities. It primarily serves as a checklist which represents the choice and choice-gaps in the present and future strategies of the organization. As can be inferred from Figure No. 1, there are 5 core elements in the diamond viz. Arenas, Vehicles, Differentiators, Staging & Pricing and Economic Logic.

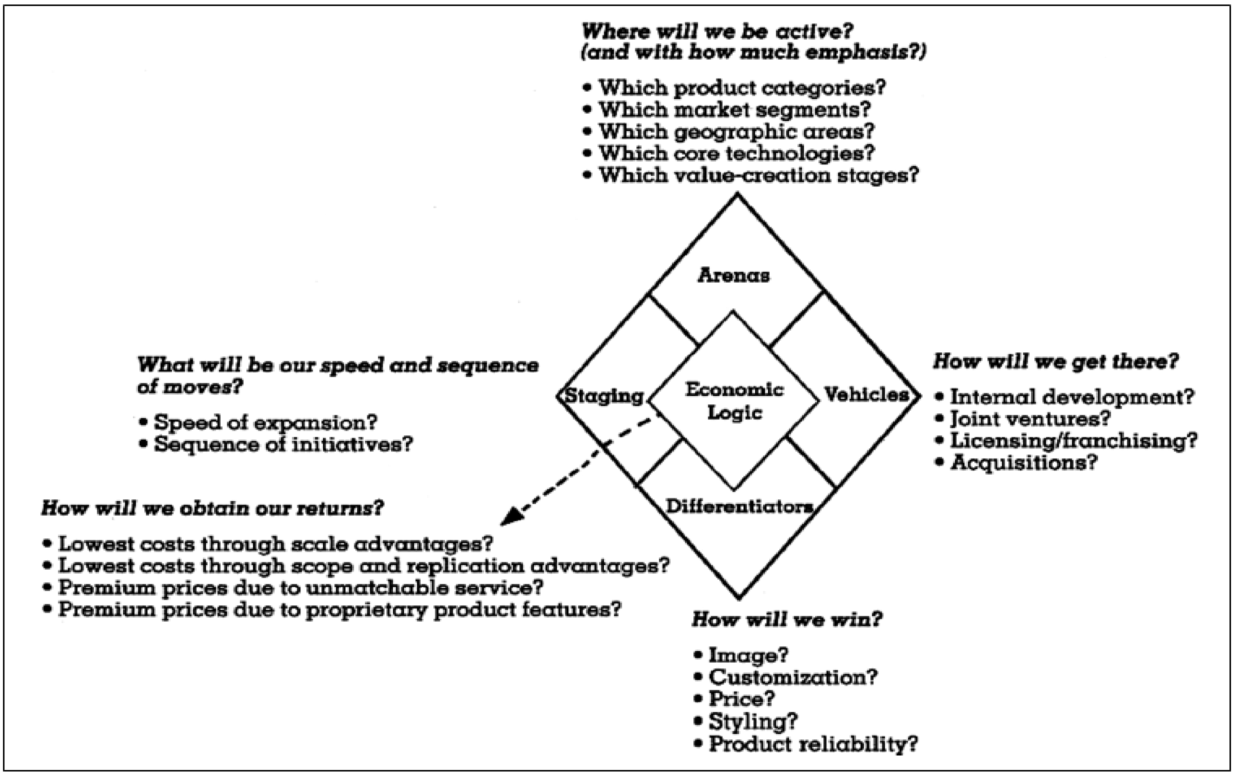

Figure No. 1 Hambrick & Fredickson's Strategy Diamond framework (source: [48])

Although the application of these concepts to Operation Barga might not seem as intuitive as say, to a standard business product/service, the value propositions professed by Operation Barga can be considered in a different light per se, so as to make them fit for analysis using the Strategy Diamond framework. For example, while analyzing the Arenas for Operation Barga under the aegis of the Strategy Diamond, although the existence of "product categories" might not seem applicable to the framework at all, one could consider the propositions rendered to the different key stakeholders as an equivalent for the same in the analysis of a public policy. The core elements of the Strategy Diamond pertaining to Operation Barga thus derived, using a similar rationale for arriving at each and every element of the framework, are represented in Table Numbers (1) – (5).

Table No. 1 The Arena for the strategy elements of Operation Barga

Strategy Element	Description
ARENAS	• **Key stakeholders**: The landlords, the cultivators & the State. • The landlord would provide **entrepreneurship**, the cultivator would offer **labour** to unlock the land's 'real value', and the State would: **(A)** mediate the relationship between the two parties, and, **(B)** abet in the provision of a robust marketplace to fulfil the requirements of both parties. • Operation Barga (or therein a slightly tweaked version of the same) was limited to **West Bengal** and **Kerala**. • **Core schema**: Securitization of the bargadars' rights via a mass-scale name-registration drive, appositely aided by government machinery. • **Value creation**: The securitization of the tenants' rights, in accordance with the modified Land Reforms Act, resulted in not only an increase in the affluence of the cultivators, but also fostered their legal empowerment. The **Food for Work** [49], in tandem with the Operation, abetted in the enhancement of the bargadars' appropriability regime.

Table No. 2 The Vehicles for the strategy elements of Operation Barga

Strategy Element	Description
VEHICLES	• The mass-scale registration drive, encompassed within the ambit of Operation Barga, achieved significant success through an **informal PPP (public private partnership) model**. • The public entity involved in this PPP was, quite intuitively, the **state government** (Left Front) that adroitly leveraged the legal forces proffered by both the State & the Centre to drive Operation Barga to new heights. • The less intuitive faction in this alliance is the **active participation of the bargadars** as the private players who drove the Operation to fruition. The State government adopted an **inductive initiation** approach wherein those bargadars who had their names registered in the record of rights, acted as evangelists who advocated the boons of the drive before their peers.

Table No. 3 The Key strategic differentiators with regard to Operation Barga

Strategy Element	Description
DIFFERENTIATORS	• The unique position of the State government, wherein they could probably be regarded as the **most critical stakeholder** in the Operation, owing to the pro-poor, pro-rural precepts leading to their victory. • The **economies of scale** [50] coupled with a passion for redistributive justice, which formed the basis for the registration drive. • A **perfect correlation** of the value propositions sought by the wronged bargadars with respect to those professed to them, which in turn fostered a sense of ownership among them.

Table No. 4 The Staging elements pertaining to Operation Barga

Strategy Element	Description
STAGING	• An **open outcry** of the government's objectives espousing redistributive justice preceded the initiation of Operation Barga. • The mass-scale registration drive, that formed the cynosure of Operation Barga, operated with **maximum intensity** in the early years **(~40% of the total number of registrations occurred in the first three years**) and gradually tapered as the years passed by. • The government machinery operated **in tandem with the evangelism of registered bargadars** to yield more registrations.

Table No. 5 The core Economic Logic pertaining to Operation Barga

Strategy Element	Description
CORE ECONOMIC LOGIC	• The **economies of scale**, enjoyed by the State government, coupled with the exclusive access to **primary** as well as **residual** rights they enjoyed, with regarding the access of legal machinery abetted in their success.

As can be inferred from the various strategic elements posited by Operation Barga, the land reform movement succeeded primarily because it honoured the delicate balance of equity & ownership regarding the role of the bargadars with regard to a resource as germane as land. Thus, the value propositions professed by the movement were perfectly in sync with those that emerged from the quantitative analysis of the fundamental unit of the relevant setting: the share-cropping contract (refer: Section IV). The veracity of these claims may be verified via year-wise agricultural productivity data of West Bengal's various districts, as listed in [51].

VI. Conclusion

The agrarian reforms in West Bengal, primarily an experiment in tenancy regulations, had witnessed unprecedented levels of success upon inception till the turn of the 21st century, when the registration drive gradually began to lose steam. Thus, a number of factions have criticized the Left Front government for shifting their focus away from Operation Barga, in particular, and their pro-poor & pro-rural objectives in general upon the end of Jyoti Basu's tenure [52]. On a more fundamental level, one may pose strong objections to the intrinsically unsustainable views of the Left Front government towards industrialization, wherein the absence of proper linkages between the industrial czars and the rural proletariat precluded the eventual attenuation of these land reform initiatives. However, one must concede that the prospect of a robust rural economy operating within a 'free market' framework has been a Utopia sought by many, but achieved by very few (if at all any). Policy makers could ameliorate this drawback and facilitate the existence of a socially co-operative utilization of resources instead of a 'dog-eat-dog-kill' world per se, if they really desire to transform rhetoric into reality. That being said, it would be gross injustice to discount the achievements of Operation Barga by dubbing it as a "flash in the pan" without attributing its success to the team of policy-makers in West Bengal at that time and officers in-charge of implementing Operation Barga on such a widespread scale, for their ingenious and gritty plan-of-action.

REFERENCES

[1] Bardhan, P., & Mookherjee, D. (2006). Pro-poor targeting and accountability of local governments in West Bengal. *Journal of development Economics*, *79*(2), 303-327.

[2] Bardhan, P., & Mookherjee, D. (2003). Political economy of land reforms in West Bengal 1978–98. *Department of Economics at University of California, Berkeley and Boston University, Working Paper*.

[3] Khasnabis, R. (1981). Operation Barga: limits to social democratic reformism.*Economic and Political Weekly*, A43-A48.

[4] Dasgupta, B. (1984). Sharecropping in West Bengal: From Independence to Operation Barga. *Economic and Political Weekly*, A85-A96.

[5] Griffin, K., RAHMAN KHAN, A. Z. I. Z. U. R., & Ickowitz, A. (2004). In Defence of Neo-Classical Neo-Populism. *Journal of Agrarian Change*, *4*(3), 361-386.

[6] Deininger, K., & Squire, L. (1998). New ways of looking at old issues: inequality and growth. *Journal of development economics*, *57*(2), 259-287.

[7] Naritomi, J., Soares, R. R., & Assunção, J. J. (2007). *Rent seeking and the unveiling of'de facto'institutions: development and colonial heritage within Brazil*(No. w13545). National Bureau of Economic Research.

[8] Dai, H., & Tai, H. C. (1974). *Land reform and politics: a comparative analysis*. Univ of California Press.

[9] Binswanger, H. P., Deininger, K. W., & Feder, G. (1993). *Power, distortions, revolt, and reform in agricultural land relations* (Vol. 1164). World Bank Publications.

[10]Bardhan, P. K. (1980). Interlocking factor markets and agrarian development: A review of issues. *Oxford Economic Papers*, 82-98.

[11]Hoff, K., & Stiglitz, J. E. (1990). Introduction: Imperfect information and rural credit markets: Puzzles and policy perspectives. *The world bank economic review*, 235-250.

[12]Carter, M. R. (1984). Identification of the inverse relationship between farm size and productivity: an empirical analysis of peasant agricultural production.*Oxford Economic Papers*, 131-145.

[13]Dobbs, T. L., & Pretty, J. N. (2004). Agri-Environmental Stewardship Schemes and “Multifunctionality”. *Review of Agricultural Economics*, *26*(2), 220-237.

[14]Sinha, N. K. (1961). *The economic history of Bengal* (Vol. 2). Firma KL Mukhopadhyay.

[15]McLane, J. R. (1977). Revenue Farming and the Zamindari System in Eighteenth-Century Bengal. *Land Tenure and Peasant in South Asia. New Delhi: Orient Longman*.

[16]Sengupta, S. (1981). West Bengal land reforms and the agrarian scene.*Economic and Political Weekly*, A69-A75.

[17]Basu, S. K., & Bhattacharyya, S. K. (1963). Land reforms in West Bengal: a study on implementation. *Land reforms in West Bengal: a study on implementation.*

[18]Sengupta, S., & Gazdar, H. (1997). Agrarian politics and rural development in West Bengal. *Indian development: Selected regional perspectives*, 129-204.

[19]Banerjee, A. V., Gertler, P. J., & Ghatak, M. (2002). Empowerment and efficiency: tenancy reform in West Bengal. *Journal of political economy*, *110*(2), 239-280.

[20]Rawal, V. (2001). Agrarian Reform and Land Markets: A Study of Land Transactions in Two Villages of West Bengal, 1977–1995*. *Economic Development and Cultural Change*, *49*(3), 611-629.

[21]Roy, D., & Banerjee, P. S. (2006). Left Front's Electoral Victory in West Bengal: An Ethnographer's Account. *Economic and Political Weekly*, 4251-4256.

[22]Bell, C. (1990). Reforming property rights in land and tenancy. *The World Bank Research Observer*, *5*(2), 143-166.

[23]Khasnabis, R. (1981). Operation Barga: limits to social democratic reformism.*Economic and Political Weekly*, A43-A48.

[24]Dasgupta, B. (1984). Sharecropping in West Bengal: From Independence to Operation Barga. *Economic and Political Weekly*, A85-A96.

[25]Dutt, K. (1981). Operation Barga: Gains and Constraints. *Economic and Political Weekly*, A58-A60.

[26]Ghosh, T. K. (1986). *Operation Barga and land reforms*. BR Pub. Corp.; Distributed by DK Publishers' Distributors.

[27]Bandyopadhyay, D. (1982). Land Reforms in West Bengal. *Habitat International*, *6*(5), 565-572.

[28]Bandyopadhyay, D. (2003). Land reforms and agriculture: the West Bengal experience. *Economic and Political Weekly*, 879-884.

[29]Appu, P. S. (1975). Tenancy reform in India. *Economic and Political Weekly*, 1339-1375.

[30]Bandyopadhyaya, N. (1981). 'Operation Barga'and Land Reforms Perspective in West Bengal: A Discursive Review. *Economic and Political Weekly*, A38-A42.

[31]Haque, T. (2000). Contractual arrangements in land and labour markets in rural India. *Indian Journal of Agricultural Economics*, *55*(3), 233.

[32]Deininger, K., Jin, S., & Yadav, V. (2013). Does Sharecropping Affect Long-term Investment? Evidence from West Bengal's Tenancy Reforms. *American Journal of Agricultural Economics*, aat001.

[33]Raup, P. M. (1963). The contribution of land reforms to agricultural development: an analytical framework. *Economic Development and Cultural Change*, 1-21.

[34]Heinz, W. (1999). *Public private partnership* (pp. 552-570). VS Verlag für Sozialwissenschaften.

[35]Mallick, R. (2007). *Development policy of a communist government: West Bengal since 1977* (Vol. 54). Cambridge University Press.

[36]Islam, S. (1979). *The Permanent Settlement in Bengal: A Study of Its Operation, 1790-1819*. Bangla Academy.

[37]Roberts, P. E. (1952). *History of British India under the Company and the Crown* (Vol. 7). London: Oxford University Press.

[38]Ashton, R. (1956). REVENUE FARMING UNDER THE EARLY STUARTS1.*The Economic History Review*, *8*(3), 310-322.

[39]Mizushima, T. (2006). The Mirasi System as Social Grammar: State, Local Society, and Raiyat in Eighteenth-Nineteenth Century South India. *The State in India: Past and Present*.

[40]Kohli, A. (1987). *The state and poverty in India: the politics of reform*. Cambridge Univ. Press.

[41]Besley, T., & Burgess, R. (2000). Land reform, poverty reduction, and growth: Evidence from India. *Quarterly journal of Economics*, 389-430.

[42]Hauser, W. (1961). *The Bihar Provincial Kisan Sabha, 1929-1942: A Study of an Indian Peasant Movement*. University of Chicago, Department of History, September.

[43]Bandyopadhyay, D. (2000). Land Reform in West Bengal: Remembering Hare Krishna Konar and Benoy Chaudhury. *Economic and Political Weekly*, 1795-1797.

[44]Fickett, L. P. (1993). The rise and fall of the Janata Dal. *Asian Survey*, 1151-1162.

[45]Nag, M. (1989). Political awareness as a factor in accessibility of health services: a case study of rural Kerala and West Bengal. *Economic and Political Weekly*, 417-426.

[46]Basar, T., Olsder, G. J., Clsder, G. J., Basar, T., Baser, T., & Olsder, G. J. (1995). *Dynamic noncooperative game theory* (Vol. 200). London: Academic press.

[47]Nash, J. F. (1950). Equilibrium points in n-person games. *Proc. Nat. Acad. Sci. USA*, *36*(1), 48-49.

[48]Hambrick, D. C., & Fredrickson, J. W. (2001). Are you sure you have a strategy?. *The Academy of Management Executive*, *15*(4), 48-59.

[49]Paul, S., & Subramanian, A. (1983). Development programmes for the poor: Do strategies make a difference?. *Economic and Political Weekly*, 349-358.

[50]SHIH, B. J. S., Harrington, W., Pizer, W. A., & Gillingham, K. (2006). Economies of scale.

[51]Saha, A., & Swaminathan, M. (1994). Agricultural growth in West Bengal in the 1980s: A disaggregation by districts and crops. *Economic and political Weekly*, A2-A11.

[52]Dasgupta, S. K. (1992). *West Bengal's Jyoti Basu: a political profile*. Gyan Publishing House.