
Farm Mechanization and Agrarian Change: Results from Village Studies in India

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Résumé

Mechanization has historically been one of the main factors of agrarian transformation. It is known to impact the economy of a village in myriad ways. Introduction of machines enhance the efficiency and quality of various agricultural operations, from land development and preparation, to sowing and harvesting. It is thus an important factor in raising agricultural production and productivity and in promoting intensive cultivation. Mechanization of farm practices also reduces costs and cuts down the losses therein. Consequently, it has been argued, that mechanization has a positive impact on farm incomes and profitability. At the same time, mechanization also plays an important role in reducing the drudgery of agricultural operations.

On the other hand, introduction of improved implements and machines to agricultural operations has also been associated with declining agricultural profitability, particularly in developing economies like India, where a large proportion of the cultivating classes consist of small and marginal farmers. Technology is argued to reflect a large farmer bias, which, in turn, adversely affects the profitability of the vast mass of cultivators. The debate on the effect of mechanization comes out even more starkly in case of agricultural employment. The impact in this case is argued to differ based on the relative scarcity of agricultural land and labour.

This perhaps points to the unsettled nature of the debate on farm mechanization and its relationship with agrarian developments, which, seemingly, is contingent upon ecological, physical and geographical factors. In addition, this association is also shaped significantly by the inequalities that prevail in the village society. This is especially true for the Indian countryside which is marked by socio-economic differentiation. Caste and class continues to be determining factors in the village economy of India. Naturally, various dimensions of farm mechanization, including ownership and the cost of machine use are mediated by the existing socio-economic structure in the village. Moreover, the unequal and fragmented distribution of land among different categories of cultivators also present a formidable challenge to efficient and profitable use of farm technology, particularly those that require economies of scale.

Noticeably, the effect of the prevailing socio-economic inequalities on aspects of farm mechanization is further enhanced by the fact that the latter is mostly driven by private capital formation in the neo-liberal regime. Private capital formation constitutes an increasingly important component of technological growth in agriculture. At the same time, private capital formation reflects, and often intensifies, the inequalities of caste and class that prevail in

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the Indian countryside.

Any inquiry into aspects of farm mechanization and its relationship with agrarian transformation has to be therefore grounded into the structural reality of the countryside. This study is an attempt in that direction. It attempts to investigate the nature and extent of farm mechanization in four villages located in different agro-ecological regions in India. It will also study the economics of machine use in the countryside.

The study bases itself mainly on the primary data from the archives of the Foundation for Agrarian Studies (FAS), as part of the Project on Agrarian Relations in India (PARI).

Mots-Clés: Mechanization, agrarian transformation, inequality, Caste and class, Village study