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# Investment pattern with special reference to temple owned lands in Tamil nadu

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There are many temples in the state, which have cultivable land and urban lands to a limited extent, donated to them for earning income to meet their maintenance expenses. These temple owned lands are given on lease to the cultivators and the rent received from them is the major source of revenue to the temples. But the purpose is not served because the rent collection is poor. The Hindu Religions and Charitable Endowment (HR & CE) Department is in overall charge of maintaining records and administering the temple owned lands. These institutions own nearly 191583 hectares (all over Tamil Nadu) of land (HR & CE, Policy Note: 2003-04). Investment of capital is beneficial and inevitable for farm production and more so with the modern technology. When farmers attempt to avail the opportunities opened up by the technological progress in agriculture, farming becomes technology intensive and also capital intensive. Whether it is owner operated or tenant operated, application of technology demands additional investment for acquiring durable productive assets that can improve productive capacity.

The fixed inputs include productive assets like land, wells, channels, pump sets, tractor, sprayers, dusters and other equipments, while the variable inputs include quality seeds, manures, bio-fertilizers, chemical fertilizers, herbicides, pesticides and energy resources for operating the tractor and other machineries. In making the required investment, tenant farmers have two limitations that are not very serious with owner- operated farmers. First, problems relate to the attitude of the tenants. Since the land does not belong to him and tenancy may change hand, investment in durable assets is risky; a tenant is less enthusiastic than owner farmers, to make such investments. The security of tenancy for a reasonably long period of say more than five years may solve this problem, but such a security is not readily available to many tenants. Second limitation comes from the ability of the tenant to borrow. For investment in durable assets, financial institutions give loans and even subsidies are available, but security of immovable assets is insisted. Tenant farmers do not have any such asset, because even the lands tilled by them are not theirs. (Consultancy Project, 1995).

For the crop loans there was no need for such security still the tenants may not be enthusiastic because they have to share the additional gains with the owner of the land with practically no share for the owners in the burden of debt and cost of production. This had a social dimension also for the non-temple tenants. However the limitations of the tenant cultivators would not be serious if the returns to the investment were large enough to motivate them. Then low return would be the cause of low investment and *vice-versa.* A cycle of low-level equilibrium might persist and causes of which should be identified and removed not only in the tenant but also of economic efficiency of the land use. Therefore, it was felt worthwhile to make a comparative

study the capital investment pattern as well as problems faced by temple owned lands and owner operated lands.

In Tamil Nadu, two districts namely Thanjavur and Tirunelveli have more acreage of temple lands when compared to other districts of the state. Tirunelveli district was purposively selected as a study area because the selected district has more acreage under temple lands and this gave opportunity to get the sufficient number of samples for study. A total of 28364 hectares of land belonged to temple in Tirunelveli district. Of this, 17144 hectares are low lands, 9781 hectares are dry lands (one or two irrigation) and 1453 hectares are rainfed lands (no irrigation). In the study area out of 11 taluks, two taluks *viz.*, Tenkasi and Shencottah were selected randomly for the study. From the selected two taluks, nine villages were selected randomly from Shencottah (five) and Tenkasi (four); 10 temple tenants were selected randomly from each village, which constituted 90 temple tenants. In order to compare the temple tenants with owner operated farms, 50 owner-operated farmers were selected randomly from eight villages (each five) and last 10 from one village. The total sample constituted 90 temple tenant farmers and 50 owner farmers, thus making the total sample to 140. The data pertaining to the year 2002-'03 were gathered.

*Determinants of Investment*

To encourage investment by temple tenants and owner farmers, the factors influencing the level of investment had to be identified first and their relative importance should be evaluated. Farm size, income of the farm family and presence of Recorded Tenancy Rights (RTR) were considered to be important. To understand their relative influence on investment log-linear production function was specified. It was:

$$1n\ In = 1n\ a_0 + a_1\ 1n\ A + a_2\ 1n\ Y + a_3\ 1n\ D + U$$

Where,

In = Investment (in Rs. '000)
A = Farm size (in ha)
Y = Annual income of the family (in Rs. '000)
D = 1 if tenant had RTR
= 0 otherwise
U = Random error term
$a_i$ = parameters to be estimated, (i = 1 to 3)

The equation was estimated separately for the two groups of farmers with the apriori expectations. The dummy variable D was not relevant for the owner farmers who had made investment in farm assets during the year ending 2002 - '03 constituted the sample for this analysis. They were 90 and 50 among temple tenants and owner farmers respectively. The Ordinary Least Square Method (OLS) with the classical assumptions was used for the estimation.

*Total Investment*

Details of investment were collected for the period of three years ending 2002-'03, because many of the investments took more than a year of completion as in the case of wells, land improvement and livestock. Therefore data for only one year (20O2-'O3) would estimate the level of investment. Not all the farmers had made investment during the period. Therefore, actual number of farmers who made investment in one form or other, total values of the investment (valued at 2002-'03 prices) and these data are presented in Table 1.

Perusal of Table 1 data revealed that the investment on land was maximum in owner farmers at Rs. 4209 (6.4 per cent), followed by temple tenants at Rs.1292 (12.3 per cent). The preference of temple tenants for investment was livestock, because it supplemented farm

**Table 1. Total Investment by Sample Farmers (2002-'03)** (Rs. $ha^{-1}$)

| S.No. | Type of Investment | Temple tenant (TT) | Owner farms (OF) |
|---|---|---|---|
| 1. | Land | 1292 (12.3) | 4209 (6.4) |
| 2. | Livestock | 51122 (91.4) | 57100 (87.0) |
| 3. | Sprayer | 2611 (4.7) | 2958 (4.5) |
| 4. | Field channel | 897 (1.6) | 1387 (2.1) |
| | Total | 55922 (100.0) | 65654 (100.0) |

(Percentages to total are given in parentheses)

**Table 2. Estimating log-linear production function of Temple Tenants**

| S.No. | Variable | Co-efficient | Standard error |
|---|---|---|---|
| 1. | Constant | 7.3038* | 0.6498 |
| 2. | Farm size | -0.0122 | 0.0163 |
| 3. | Income | 0.0469*** | 0.0632 |
| 4. | Dummy of RTR | -0.00002 | 0.0009 |

$R^2$ = 0.0120 F = 0.35

*** Statistically significant at 10% level.

**Table 3. Estimating log-linear production function of Owner Farmers**

| S.No. | Variable | Co-efficient | Standard error |
|---|---|---|---|
| 1. | Constant | 6.0368* | 4.5581 |
| 2. | Farm size | 1.3780 | 0.2997 |
| 3. | Income | 0.2543*** | 0.4104 |

$R^2$ = 0.3228 F = 10.72

*** Statistically significant at 10% level.

income. Dairy animals provided employment to the women in the family, while bullocks helped men to go for off-farm employment for ploughing operations, carting manures and transport of seedlings occasionally. It was 91.4 per cent (Rs.51122) for temple tenants while in owner farmers the investment on livestock was 87.0 per cent (Rs. 57100). Many of the farmers wanted to improve drainage and irrigation facilities. They desired to invest in wells; irrigation channels, threshing floors and other farm structures such as cattle shed or storage. However, majority of the temple tenants had reservation on this investment because the land did not belong to them. If temple authorities encouraged it and with a guarantee of lease for the next 15 years and a share in the investment cost, temple tenants would take up the investment which would improve the annual rates of investments.

*Determinants of Investment on Temple tenants*

The log-linear production function estimated for the temple tenants who had made investment during the three years ending 2002-'03 is presented in Table 2.

The value of $R^2$ was very low and hence the equation could not explain about maximum per cent of variation for Y, since some of the variables not included in the equation. (Such as attitude and perception of the farmers for the investment and high risk bearing ability) because of the problems of measurement. Among the variables specified only income had very low value (0.0469). However it's co-efficient was statistically significant, implying that income had some effect on investment. The effect of income would however be felt indirectly for the influence of amount borrowed. The elasticity of investment with respect to size of the farm was negative and statistically not significant. It implied that size of the farm would not affect the level of investment. Therefore bringing the temple tenants together for collective action would help farm investment. The reason might be that tenants thought that the full profit goes to someone and hence they are not willing to invest any investment on tenants' lands when compared to owner operated lands. Finally, the co-efficient of the dummy variable (D) was -0.00002 and statistically non-significant, meaning that the temple tenants with RTR invested significantly larger funds in assets than those without RTR. Then a very strict enforcement of RTR was needed for, not only for implementing the legislation but also for its beneficial effect on investment. The coefficient of income (0.0469) and farm size (-0.0122) indicated the level of their influence on investment. A very strict enforcement of RTR will be needed for, as the most important determinant of investment by temple tenants, followed by income and farm size.

*Determinates of Investment on Owner Farms*

The data on log-linear production function estimated for the owner farms is presented in Table 3. The estimated equation showed a good fit with expected sign for the entire statistically significant coefficient. The coefficient of constant had the expected positive sign with statistically significant. The farm size ranked first with the largest elasticity. However, the relatively low value of $R^2$ revealed that there were factors, other than those specified in the equation, with significant effect on investment.

The availability of credit, interest rate and farm size holding were the general determinants of investment in any farm. While income of the family had lower effect on investment. Among tenant farms presence of RTR had a positive effect on investment.

*Problems in Farm Investment*

The reasons stated by the farmers for not making any investment were discussed with the investors and evaluated for their validity. The list is presented in Table 4.

**Table 4. Problems in Farm Investment.** (Numbers)

| S.No. | Particulars | Temple tenants (TT) (n=90) | Owner farms (OF) (n=50) |
|---|---|---|---|
| 1. | Benefit will go to the owner | 80 (89.0) | 0 |
| 2. | Small income | 68 (75.6) | 28 (56.0) |
| 3. | High risk | 66 (73.3) | 26 (52.0) |
| 4. | Security is not available | 65 (72.2) | 21 (42.0) |
| 5. | Can be done in later | 48 (53.3) | 0 |
| 6. | Credit is not available | 48 (53.30 | 0 |
| 7. | Owners does not agree to support borrowing | 42 (46.7) | 0 |
| 8. | Interest rate is higher | 37 (41.0) | 0 |

Percentages to total are given in parentheses

Maximum (89.0 per cent) percentage of temple tenants was indicated that the benefit would go to the owner. The most important constraint was low income (75.6 per cent). Higher risk involved was also expressed by 73.3 per cent of the temple tenants. Further, 72.2 per cent of the temple tenants felt that lack of security as a reason for not making investment. Then, 53.3 per cent of temple tenants did not felt any urgency to make investment, which they desired to make later. Credit constraint was reported by 53.3 per cent. Owners disagreed for borrowing and the highest interest rate were the reasons i.e. 46.7 per cent and 41.0 per cent respectively. Moreover, owner farmers expressed similar problems as well, majority of them indicated (56.0 per cent) the income of the family was smaller and higher risks associated with it were the other reasons (52.0 per cent). A few owner farmers (42.0 per cent) reported the lack of security as a reason for not making investment. Thus, the results showed that the owner farmers did not find much difficulty in making investment if they desired to make it. In sum, regarding farm income, reduction in risk and security of tenancy would motivate the temple tenants to make adequate investment. But the motivator would be translated into action only if adequate credit was supplied to them. In credit, supply was more important than interest rate, if institutional credit at the prevailing rates of interest was available. Temple tenants required the help of the owners (temple or others) to enable their borrowing and investment. This had to be arranged through some policy measures. Investment would increase income, which in turn would improve the credit worthiness of farmers and would put the farmers on a cumulative growth path.

*Notes:*

*Record of Tenancy Rights (RTR); as per the Tamil Nadu Agricultural Lands Act, 1969, any person cultivating land not owned by him, but taken on lease has to register his tenancy right with the concerned taluk office. This is called Record of Tenancy Rights (RTR).*

## Reference

Consultancy Project on "Investment and Productivity of Temple Owned Lands in Tamil Nadu, 1995 (Submitted to State Planning Commission, Govt. of Tamil Nadu).