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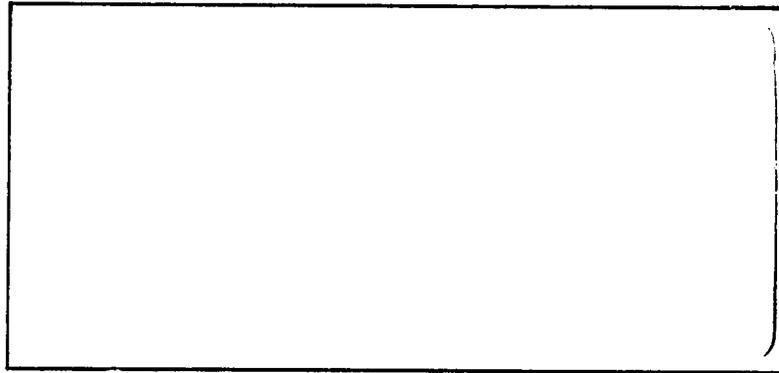
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**Southern University and A & M College
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FARM SIZE AND RURAL POVERTY IN LOUISIANA

BY

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FOREWORD

The Unemployment and Underemployment Institute was created to coordinate all international economic development activities of the 211(d) grant at Southern University.

In 1972, the Agency for International Development (AID) approved a five year grant to Southern University to strengthen and increase its capacity in economic/agricultural economics to enhance Southern's capabilities to contribute to the resolution of problems of rural unemployment and underemployment in developing countries.

The general objectives of the Institute are (a) to develop and coordinate the activities of the University for greater participation in international economic development programs; (b) to make available the capacities and expertise thus developed to public and private agencies involved in industrial development programs; and (c) to conduct research, seminars, and workshops on domestic and international development problems including cooperatives, manpower utilization, small farmers, housing, population, nutrition, leadership training, and community development.

In keeping with objective (a), the University supports several faculty members working towards advanced degrees in the area of economic development and related disciplines, supports undergraduate scholarships to foreign and U. S. nationals in the Department of Agricultural Economics and Economics, provides travel to professional seminars for faculty, foreign exposure to development experiences, and special training on techniques of program design and evaluation.

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Results of research projects consistent with the objectives of this program are published under the Institute's Faculty-Staff Research Paper Series. Papers published under this series reflects the diversity of interests and specialties of our faculty and staff.

The above activities of the Institute demonstrate the capacities and expertise of Southern University developed through the 211(d) program. As a result of the 211(d) grant, the Unemployment-Underemployment Institute at Southern University is in a position to offer expert and technical personnel to private and public agencies involved in international economic development programs.

T. T. Williams
Director

FARM SIZE AND RURAL POVERTY IN LOUISIANA

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ABSTRACT

There are reasons to believe that excessively large farms are responsible for increasing rural poverty. This paper attempts to test if this is true. Correlation coefficients of farm size, number of small farms, number of large farms, etc., with rural poverty has been worked out. Correlation of percentage of rural poor with the percentage of farms that are small, has been observed to be significantly negative, thereby suggesting that the larger the percentage of small farms, the less is the percentage of poor people in rural areas. The finding seems to have strong domestic and international policy implications.

INTRODUCTION

The problem of rural poverty has received the attention of several research workers in recent years. The causes of rural poverty mentioned in various studies (i.e., Marion Clawson, Buis T. Inman), are lack of education and training, lack of demand for labor relative to supply in rural areas, lack of information about jobs, etc. The possibility that farm organization itself might be a cause of rural poverty, seems to have been completely ignored. Excessively large farms are likely to increase rural poverty by denying the means of production to a large number of rural people. Conversely, a large number of relatively smaller farms will keep most of these people off the welfare rolls. This paper examines this possibility by testing the correlation between farm size, percentage of large farms, percentage of small farms, etc., and the percentage of rural people that are poor.

DATA

The data used in this study has been obtained from the 1969 Census of Agriculture and the 1970 Census of Population. State of Louisiana is divided into 64 parishes or counties. The Orleans Parish is entirely urban, so it was rejected. The data regarding rural poverty for each of the remaining 63 parishes were obtained from the Census of Population, Louisiana, 1970. The corresponding data on number of farms of various sizes and economic classes, etc., were obtained from the Census of Agriculture, Louisiana, 1969.

RURAL POPULATION

Rural people are defined by the United States Census as those living outside the urbanized areas and in places of less than 2,500 inhabitants. The rural population is subdivided into the rural-farm population, which comprises all rural residents living on farms, and the rural nonfarm population, which comprises the remaining rural population. The farm population consists of persons living on places of 10 or more acres from which sales of farm products amounted to \$50 or more in the preceding calendar year or on places of fewer than 10 acres with income of \$250 or more. All remaining persons in rural areas were classified as rural nonfarm.¹

As reported by the Census Bureau in the correction note,² a misclassification has occurred between the farm and non farm components of the rural population. The data on farm and non farm poverty, may, therefore, be subject to minor errors. The data for the rural area as a whole is unaffected.

¹ United States Bureau of the Census, Census of Population: 1970, Vol. 1. Characteristics of the Population, Part I, United States Summary, Sec. 2., Ap. 2.

² United States Bureau of the Census, Census of Population: 1970, Vol. 1. Characteristics of the Population, Part 20, LA, Washington, D. C. p. 148.

POVERTY STATUS

The poverty status of the families is determined by the Census Bureau with reference to income thresholds which vary according to family size, sex of the family head, number of children under 18 years old, and farm and non-farm residence. Poverty thresholds for a farm family is set at 85% of the corresponding level for a non-farm family. The cu. offs are revised annually to allow for changes in the cost of living as reflected in the Consumer Price Index.

In 1969, the poverty thresholds ranged from \$1,487 for a female unrelated individual 65 years old and over, living on farm to \$6,116 for a non-farm family with a male head and 7 or more persons. The average poverty threshold for a non-farm family of 4 headed by a male was \$3,745.³

EXTENT OF POVERTY IN LOUISIANA

About half of the total rural poverty in the United States is concentrated in the South, and Louisiana has a good share of it.

The details of rural as well as urban poverty in Louisiana are given in Table 1.

This Table shows that, although the urban poor are more numerous than the rural poor, the incidence of poverty is greater in rural than in urban areas. In rural areas, 33% of all people are poor as compared to 22.8% in urban areas.

3
United States Bureau of the Census, Census of Population: 1970, Vol. 1. Characteristics of the Population, Part 20, Louisiana, Washington, D. C. Appendix 32.

Table 1. Extent of Poverty in Louisiana According to Urban,
Rural, Farm and Non Farm Residence.

Residence	Poor Persons	Total Persons	Percent Poor
Rural Farm	57,428	170,150	33.8
Rural Non Farm	343,190	1,043,012	32.9
All Rural	400,618	1,213,162	33.0
Urban	532,053	2,337,645	22.8
All State	932,671	3,550,807	26.3

The prevalence of rural poverty, both farm and non-farm, in Louisiana is widely different from one parish to the other. There are parishes in which very few of the rural people are poor, and there are other parishes in which an extraordinarily large percentage of the rural people are poor. The minimum percentage was found to be 7.8% in the East Baton Rouge Parish, as against 60.4% rural poor in East Carroll Parish. The location of farm poverty was in general, identical with the location of all rural poverty. In other words, parishes which had a high percentage of farm poverty also had a high percentage of all rural poverty.

FARM SIZE DISTRIBUTION IN LOUISIANA

Two aspects of the farm size distribution will be covered here. One is the distributions by size classes, and the other is the distribution by economic classes. The economic classification is based on the market value of all agricultural products sold by the farmer in the Census Year.

DISTRIBUTION OF FARMS BY SIZE CLASSES

In the State of Louisiana, 72% of the farms are small (of less than 180 acres), but they account for only 19% of the total area in farms. As against this only 4% of the farms are large (1f 1,000 acres or more), but they cover 40% of the total farm area. Table 2 gives the number of farms, percentage of farms, acres in farms, and percentage of acres in farms in nine size classes.

The percentage of farms in each class varied widely from parish to parish. In Jackson Parish, no farm was above 1,000 acres, whereas, in West Feliciana Parish, more than 16% of the farms fell in this category, and they covered 71% of the total farm area in the parish. Similarly, in LaSalle Parish, 92% of the farms were small and they covered 66% of the area, but in Jefferson Davis, only 36% of the farms were small and covered less than 6% of the area.

TABLE 2

Distribution of Farms and Acres in Farms in Louisiana, by Size

Size Classes	Number of Farms	Acres in Farms	Percentage of Farms	Percentage of Acres in Farms
1-49 acres	15643	399,786	37.0	4.0
50-99 acres	8257	585,849	19.5	6.0
100-179 acres	6580	871,885	15.5	9.0
180-219 acres	1931	381,700	4.5	4.0
220-259 acres	1363	324,389	3.3	3.3
260-499 acres	4065	1,456,624	9.7	14.8
500-999 acres	2709	1,849,481	6.4	18.8
1000-1999 acres	1185	1,576,669	2.8	16.1
2000 acres and over	536	2,351,279	1.3	24.0
All Farms	42269	9,788,662	100.0	100.0

Source: United States Bureau of the Census, Census of Agriculture, 1969.
Louisiana, op.cit.

DISTRIBUTION OF FARMS BY ECONOMIC CLASSES

The 1969 Census of Agriculture classified all farms into nine economic classes on the basis of sales during the census year. Farms with sales of \$50 -- \$2,499 were divided into three classes; class 6 farms, part-time farms, and part retirement farms. If the operator was under 65 years of age who did not work off the farm 100 days or more, the farm was classified as class 6. Parttime farms have a farm operator under 65, who worked off the farm 100 days or more. Part retirement farms have an operator 65 years old or over. The distribution of farms on this basis is given in Table 3.

The percentage of farms in each economic class also varied widely from parish to parish. LaSalle parish had less than 1% of its farms classified as Class I, whereas, in St. James and St. John Parishes, over 27% of the farms were Class I. Similar variations exist in all other Classes.

RELATION BETWEEN POVERTY AND FARM SIZE

Next we present two maps of Louisiana. Map 1 shows 20 parishes with the highest percentage of rural people in poverty. Map 2 shows 20 parishes with the highest percentage of small farms (below 180 acres). A comparison of the two maps indicates that by and large, the location of rural poverty is different from the location of small farms. In other words, the parishes with the highest incidence of rural poverty are not the ones which have a large percentage of small farms. This gave us an idea that may be the existence of small farms keeps the parishes from having too much rural poverty. So, we set out to find the correlation between rural poverty and the various attributes of farm size distribution, i.e., the percentage of small farms, percentage of large farms, percentage of farms below Class IV, etc. The correlations observed are significant.

TABLE 3

Showing the distribution of farms in Louisiana
according to Economic Classes.

Economic Classes	Number	Percentage
Class 1 (Sales of \$40,000 and over)	3155	7.5
Class 2 (Sales of \$20,000-\$39,999)	3312	7.8
Class 3 (Sales of \$10,000-\$19,999)	3447	8.1
Class 4 (Sales of \$5,000-\$9,999)	4170	9.9
Class 5 (Sales of \$2,500-\$4,999)	5991	14.2
Class 6 ^I	5909	14.0
Part Time ^I	12025	28.4
Part Retirement ^I	4226	10.0
Abnormal ^{II}	34	0.1
All Farms	42269	100.0

^I All these classes have sales of \$50 to \$2,499.

^{II} These include institutional farms, experimental farms, etc.

Source: U. S. Bureau of the Census, Census of Agriculture, 1969. Louisiana
Vol. 1. Section 2. Washington, D. C. 1972. page 1.

CORRELATION COEFFICIENTS BETWEEN PROPORTION OF FARMS IN DIFFERENT SIZE CLASSES AND THE PROPORTION OF RURAL PEOPLE IN POVERTY

Table 4 gives the correlation coefficients of the proportion of farms in different size classes with the proportion of rural farm persons in poverty, rural non-farm persons in poverty, and all rural people in poverty. A strong positive correlation is observable for large farms (1,000 acres and above). This means that the greater is the percentage of large farms in a parish, the greater is likely to be the percentage of rural people in poverty in that parish. The size categories 500 - 999 acres and 260 - 499 acres also exhibit positive correlation, which implies that farms above 260 acres also have the effect of increasing rural poverty.

The correlation coefficient of the percentage of farms below 260 acres, with rural poverty, is significantly negative. The other smaller size categories also show up negative correlation with rural poverty. This also involves the same conclusion, that the greater is the percentage of small farms in a parish, the less is likely to be the percentage of poor people in that parish.

CORRELATION COEFFICIENTS BETWEEN PROPORTION OF FARMS IN DIFFERENT ECONOMIC CLASSES AND THE PROPORTION OF RURAL PEOPLE IN POVERTY

Table 5 gives the correlation coefficients of the proportion of farms in different economic classes, with the proportion of rural farm persons in poverty, rural non-farm persons in poverty, and all rural people in poverty. A positive correlation is observable for all the higher classes, thereby suggesting that the greater is the percentage of large farms, the more is the percentage of poor people in rural areas likely to be. Negative correlation is observed for "Farms Below Class", thus pointing out that the greater is the proportion of small farms the less is the proportion of rural people in poverty.

TABLE 4

Showing the correlation of rural poverty with the percentage of farms of different sizes.

Percentage of Farms of	Percentage of People in Poverty		
	Rural Farm	Rural Non Farm	All Rural
1,000 acres and above	0.3251** (.0091)	0.2195 (.0803)	0.2332* (.0625)
500- 999 acres	0.1676 (.1862)	0.1229 (.6610)	0.1149 (.6269)
260-499 acres	0.1630 (.1989)	0.2843 (.0225)	0.2637 (.0346)
220-259 acres	-0.1577 (.2148)	-0.1534 (.2281)	-0.1688 (.1830)
Below 500 acres	-0.2643* (.0342)	-0.1836 (.1461)	-0.1868 (.1389)
Below 260 acres	-0.2491* (.0462)	-0.2404* (.0546)	-0.2345* (.0610)
Below 220 acres	-0.2169 (.0839)	-0.2092 (.0960)	-0.2018 (.1088)
Below 180 acres	-0.1844 (.1442)	-0.2083 (.0975)	-0.1992 (.1136)

Figures in parenthesis are the probabilities of a greater correlation coefficient than is present.

*Indicates significance at 5% level.

**Indicates significance at 1% level.

TABLE 5

Showing the Correlation of rural poverty with the percentage of farms of different economic classes.

Percentage of Farms of	Percentage of People in Poverty		
	Rural Farm	Rural Non Farm	All Rural
Class 2 and above	0.2110 (0.0931)	0.1833 (.1467)	0.1807 (.1529)
Class 3	0.2167 (.0842)	.0492 (.7036)	.0474 (.7135)
Below Class 3	-0.2387* (.0564)	-0.1578 (.2144)	-0.1552 (.2225)
Below Class 4	-0.2426* (.0524)	-0.1577 (.2147)	-0.1582 (.2132)

Figures in parenthesis are the probabilities of a greater correlation coefficient than is present.

Indicates significance at 5% level

CONCLUSIONS

The correlation coefficients of the percentage of rural poor with the percentage of farms below 180 acres, below 220 acres, below 260 acres, below 500 acres, below Class 3 and below Class 4, has been found to be consistently negative. The correlation of rural poverty with percentage of farms between 500-1,000 acres, above 1,000 acres, Class 3 farm, and farms above Class 2, has been found to be consistently positive. The results are statistically significant in several cases.

This leads us to the conclusion that the existence of a large number of small farms reduces rural poverty, both farm and non-farm poverty. Conversely, the existence of large farms increases rural poverty.

The correlation coefficients though statistically significant in several cases are relatively small, this suggests that farm size is not the only explanatory variable and that there are other factors which contribute to poverty. These factors might be, lack of employment opportunity, lack of mobility, lack of training, etc. Nonetheless, the consistency and the statistical significance of the coefficients is enough to suggest that farm organization is an important factor that determines rural poverty. Excessively large farms (particularly more than 1,000 acres) are responsible for increasing rural poverty by denying the means of production to a large number of rural people who end up on welfare rolls.

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