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RURAL CLASS STRUCTURE IN MEXICO:
NEW DEVELOPMENTS, NEW PERSPECTIVES

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ABSTRACT

This paper examines a number of criteria by which to categorize rural households into distinct socioeconomic classes. Based on the author's sample survey of 211 households in three agricultural regions of the state of Aguascalientes, Mexico, the study argues that an analysis of rural class structure must focus not only on access to the means of production and the extent of participation in the labor market but also on internal structural features of domestic units such as household size, generational composition, and the sex and age division of labor. Statistical tests strongly support the thesis that considerations of household structure and organization sharpen and enrich the concept of class. The results also define and distinguish three main class types in the survey regions--commercial, subsistence, and landless households.

RESUMEN

Este trabajo analiza un conjunto de criterios que permiten llegar a una clasificación de tipos de productores agrícolas. Basado en una encuesta de 211 unidades de producción en tres regiones rurales del Estado de Aguascalientes, Mexico, el trabajo muestra que un analisis de clase debe centrarse, tanto en la posesión de los medios de producción y en el grado de participación en el mercado de trabajo, como en la estructura interna de la unidad incluyendo el tamaño de ella, la composición generacional y la división de trabajo por sexo y edad. Los resultos estadísticos apoyan la tesis de que la incorporación de variables referidas a la organización y estructura de la unidad facilitan y enriquecen la explicación sobre el concepto de clase. Los resultados también permiten definir y distinguir tres principales clases en las regiones de la encuesta: los productores comerciales, los productores de subsistencia y los trabajadores sin tierra.

Social scientists who study the dynamics of peasant society have long been preoccupied with questions about the nature of socioeconomic classes in rural areas: Given the rapid and global expansion of capitalism, how is the function of peasant society to be interpreted? To what extent has the peasantry become integrated into the wider society? Should social scientists continue to use "the peasantry" as a category?

In post-revolutionary Russia the agrarian question elicited a very heated and theoretically sophisticated discussion based on analytical paradigms as diverse as neoclassical economics and Marxist political economy (Shanin, 1977). In contemporary Third World countries, where large proportions of the population reside in rural areas, the determination of social classes remains an equally perplexing and politically charged issue.

In recent years the agrarian question in Mexico has been dominated by an intense debate about whether the peasantry will continue to survive or eventually disintegrate. The purpose of this paper is to highlight some of these forcefully contested issues as they relate to the conceptualization and quantification of agrarian classes. Based on the author's sample survey of 211 households in three distinct agricultural regions of the state of Aguascalientes, Mexico, this study argues that an analysis of the class characteristics of rural units of production must focus not only on such traditional economic indicators as ownership of the means of production or the extent of participation in the labor market but also on internal structural features of domestic units such as household size, generational composition, and the sex and age division of labor.

1

This paper is comprised of five sections. The first presents a brief overview of the different theoretical approaches developed to pinpoint socioeconomic stratification in Mexico's rural sector.

Drawing upon this discussion of peasant differentiation, the second section introduces a quantitative approach to the empirical classification of rural households. Utsa Patnaik's (1976) measure of "labor exploitation" is used to identify class divisions based on the buying and selling of household labor power.

The third section moves beyond the class categories suggested by the labor exploitation index and proposes a more comprehensive theoretical approach to class structure. This section examines how the addition of internal household features enriches the concept of class.

Using the first three sections as a theoretical foundation, section four gives a detailed empirical analysis of class structure in the study region. Results of factor analytic tests support the theoretical premises of the study and yield a composite measure of class.

A summary section draws together the main conclusions emerging from the paper.

I. Class Structure in the Rural Sector: Typologies and Debates

One of the first and most important typologies of agrarian producers in Mexico was formulated in the 1960s by the Centro de Investigaciones Agrarias (CDIA). In a monumental study, Estructura agraria y desarrollo agrícola (1974), CDIA considered divisions among units of production to be generally quantitative in character. Land-size, value of production, value of agricultural machinery and wage employment served as empirical measures of differences between rural groups. Using the value of output produced by

different agrarian units as the primary delimiter, the CDIA defined five strata: infrasubsistence, subfamilial, familial, multifamilial medium and multifamilial large.

Early critics of this approach faulted the analysis for failing to consider differences in the forms of social organization or the social relations of production, (see, Stavenhagen et al., 1968, on the preliminary versions; and Gutelman, 1974). In fact, CDIA's emphasis on the relationship between land-size/tenure and productive efficiency implicitly assumed that all the identified strata operated with the same economic and technical rationale: that is, that decisions about the allocation of disposable resources (what, how and for whom to produce) were all guided by the same criteria (CEPAL, 1982).

Stavenhagen enlarges on this criticism by examining the heterogeneous nature of the agrarian sector through an analysis of the social relations of production. In Neolatifundismo y explotación (1968), he uses the variables developed by CDIA but attributes the resulting differences among rural groups to historically determined social processes. In this scheme three major landholding groups constitute the agrarian structure: a small-holding minifundista class, composed of both private and ejidos units; unidades familiares, or family operated production units and neolatifundistas, large and medium land owners. Stavenhagen's analysis, in contrast to the CDIA study, also clearly identified the landless, agricultural wage-laboring population as a distinct social class.

Stavenhagen's formulation of social classes on the basis of ownership of the means of production paved the way for subsequent investigations more explicitly concerned with differentiating capitalist from peasant forms of production. Here both the contradictions internal to a petty commodity

mode of production and a capitalist mode and the contradictions between the two constitute the agrarian structure. These contradictions crystalize into what Bartra (1974) considers the three basic sectors of the rural structure: the rural bourgeoisie, the petty commodity or peasant class, and the rural proletariat.

The first stratum identified in Bartra's analysis, the rural bourgeoisie, is marked by its exclusive use of wage labor in the production process. This class--equivalent to CDIA's multifamilial large stratum-- contains four subgroups: the large agrarian bourgeoisie, the medium agrarian bourgeoisie, the rural commercial bourgeoisie, and the rural bureaucracy. The second sector, the peasant economy proper, depends on family labor for production. Within this stratum, Bartra identifies a group of middle peasants in the process of capitalization who are generally engaged in market production, and a semi-proletariat or impoverished peasant sector which produces for its own consumption and whose agricultural activities constitute only a small percentage of total income. At the bottom of the class ladder Bartra locates the dispossessed, wage-earning stratum, the rural proletariat.

The deepening economic crisis in Mexico's agrarian sector and the resurgence of peasant struggles in the mid-1970s spurred sharp theoretical and ideological divisions among scholars concerned with the question of rural class structure. Bartra's analysis of modes of production gave way to two opposing views in the debate on the economic and political future of the peasantry: the campesinista and the descampesinista.

The campesinistas (see Warman, 1976; Esteva, 1978 and 1980; Bartra, 1979; Díaz Polanco, 1979) emphasize the persistence and stability of peasant forms of production within capitalist social formations. They

argue that while the development of capitalism has exploited and partially eroded the peasant economy, the agrarian sector will not ultimately be polarized into capitalists and proletarians. The peasant economy persists because it is substantially able to reproduce the domestic unit, thereby providing a buffer against capitalist encroachment.[1] Peasant struggles are seen as defensive, directed toward acquiring and retaining land resources.

Much of the theoretical support for the campesinista approach is dervied from the work of A.V. Chayanov (1966). Chayanov, a Russian economist associated with the "organization and production school" for the study of the peasantry in the early part of the century, centered his analysis on the internal dynamics of the peasant family economy. The campesinistas particularly concur with Chayanov's characterization of the peasant economy as a system in its own right, one that is qualitatively different from the capitalist sector (CEPAL, 1982). Although many campesinistas acknowledge differentiation within the peasant economy, they are primarily concerned with juxtaposing the peasant economy (where family labor constitutes the labor force, and consumption and simple reproduction are the objects of production) and capitalist agriculture (where surplus extraction and accumulation motivate production).

The writings of Marx (1975), Lenin (1972), and Kautsky (1981) on capital accumulation and the development of capitalism in agriculture have shaped the terms of the discussion for the descampesinistas (see Bartra, 1974; Guerrero, 1979; Paré, 1979). They contend that the process of capital penetration and accumulation in the countryside has led to a slow but marked differentiation of the peasantry into two directly opposite types, the rural proletariat and the peasant bourgeoisie (Lenin, 1972). In contrast to the campesinistas, they cite the increasing incidence of

proletarianization in the countryside as evidence of the decomposition of the peasantry, thus heralding the developing proletarian character of peasant struggles.

The descampesinistas' theoretical objective is to discern the numerous mechanisms though which noncapitalist forms of production are increasingly subordinated to capital. They argue that capitalist development in agriculture not only polarizes the agrarian sector into workers and capitalists but also gives rise to a whole range of transitory subdivisions among classes, i.e., rich, middle and poor peasants, which assume unstable and contradictory positions in the agrarian structure.[2] Thus the descampesinistas vigorously reject the notion of a self-regulating, homogeneous peasant society and predict instead its ultimate disintegration.[3]

The campesinista-descampesinista debate on the conditions and future of the peasantry has significantly expanded the terms of discussion used in studies of the rural sector. Simply by exploring the complexity of the issues involved, both theoretical trends--although they diverge in terms of political perspectives and analytical tools--have greatly enriched our understanding of the nature and dynamics of the rural masses. The recognition of a highly differentiated agrarian sector has drawn attention to the necessity of considering social and economic factors and has thereby revealed how a class system is based on differentiated roles in the productive structure.

The following section examines one method of quantifying several of the key conceptual issues raised here. The approach, based on the work of the Indian economist, Utsa Patnaik (1976) confronts many of the same issues and problems posed by the Mexican case.[4] Although her analysis closely follows the conceptual framework adopted by the descampesinistas, our

intention here is neither to polemicize nor to ponder the revolutionary

potential of one rural group or another. Patnaik's methodology was chosen

for discussion because conceptual issues of class are examined through

empirical categories--this approach is generally absent from the Mexican

debates on rural class structure.[5]

II. Class Differentiation Within the Peasantry: Patnaik's Methodology

The methodology developed by Patnaik to address the issue of class

structure in the rural sector analyzes the way in which households partici-

pate in the relations of production.

While stressing that no one index can fully measure class status,

Patnaik proposes that the labor exploitation criterion or "the use of out-

side labor relative to the use of family labor would be the most reliable

single index for categorizing the peasantry." (1976:87, Patnaik's

emphasis.) She argues as follows: The uneven distribution of the means of

production in the rural sector reflects a process in which certain house-

holds accumulate most productive resources and thus require more labor than

can be provided by family members while other households have so few

resources as to necessitate selling their labor power. At a general level,

then, households can be classified by the extent of their participation in

the labor market. Patnaik presents the following "E" index or labor

exploitation criterion[6] to categorize "mutually exclusive economic

classes":

$$E = (X_1 - X_0)/Y$$

where X_1 equals total labor days hired in by the household; X_0 equals total

labor days hired out by the household; and Y represents family (household)

labor days on the operational holding.[7]

The numerator of the E index determines whether a household is a net seller or net buyer of labor power. The relationship between net labor $(X_1 - X_0)$ and family labor (Y) thus indicates the household's relative dependence on wage labor for subsistence. For example, a fully proletarianized household--lacking land and other of means of production--neither hires in labor $(X_1 = 0)$ nor performs family labor $(Y = 0)$. In this case the E ratio tends toward negative infinity, since the household participates in the labor market only as a seller of labor power $(X_0 > 0)$. At the other extreme, a pure capitalist unit of production depends exclusively on the labor of others $(X_1 > 0, X_0 = 0, Y = 0)$ for production; E therefore approaches positive infinity. For those classes not identified as exclusively capitalist or proletarian, the sign and size of E determine whether a peasant household is a net appropriator of labor or on the whole is exploited.

In applying the E criterion to the Aguascalientes survey data[8] (see Table 1), several salient trends emerge across regions. First, the class divisions given by the E ratio show that only a small percentage of the landed, i.e., the capitalist/rich[9] and the upper-middle classes, exhibit net use of labor in each region. Second, the data provide no evidence of a self-sustaining middle peasantry or family farm that neither exploits labor nor is itself exploited $(X_1 = 0, X_0 = 0,$ and $E = 0)$. And finally, the majority of landholding households in all three regions belong to the lower stratum of the peasantry. In fact, the average number of labor days hired out by the poor peasantry approximates that of the full-time laborer class much more closely than it does other landed sectors.

In examining the data on a region by region basis, however, the observed patterns of class stratification shed light on the weaknesses of

the E ratio as a class proxy.[10] In El Valle, for example, the absolute size of the wage-laboring population suggests that both the lower-middle and the poor peasantry are significantly proletarianized. While the data establish a clear break between the completely proletarianized stratum and the dominant class in the region, the upper-middle peasantry, the class divisions given by the E ratio between the lower-middle and the poor sectors seem inappropriate on the basis of the empirical findings.

In El Llano more serious questions emerge regarding the class divisions created by the net labor ratio. In El Llano, the poorest region in the survey, the use of the net labor criterion creates a whole range of categories, from capitalist/rich to full-time laborer, which appear to be arbitrary. In fact, for the landless sector through the upper-middle peasantry, the absolute values cited for average family days worked, labor days hired in and labor days hired out, more accurately reflect the realities of El Llano than does the value of E per se. The following trends stand out: 1) In the entire middle sector, the average number of labor days worked on the operational holding (including hired in labor) is very high; 2) the lower-middle and poor peasantry as groups do not depend to any great degree on wage workers for agricultural production; 3) The poor on average hire out almost 30% more labor days than the completely proletarianized class. (Wages earned by the poor are correspondingly lower than those of the completely proletarianized class, so that more members of a poor peasant household will tend to hire out their labor.)

Disaggregating E, then, captures the general character of agricultural production in El Llano: labor intensive production of basic crops on non-irrigated land; cultivation largely with the use of the household labor force; and widespread dependence on non-farm sources of employment. This

Table 1

E Ratio Classification: Aguascalientes Survey Data[a]

Household Classifi-cation	No. of House-holds	Average Family Days Worked on the Land (Y)	Average Labor Days Hired in (X_i)	Average Labor Days Hired out (X_o)	Average Net Labor Days (X_i-X_o)	E Ratio $E=\dfrac{X_i-X_o}{Y}$
Region 1	El Valle					
Capitalist /Rich	0	-	-	-	-	-
Upper-Middle	7 (8.43)	360.28	159.57	52.28	107.28	0.29
Lower-Middle	10 (12.04)	447.80	58.70	161.80	-103.10	-0.23
Poor	29 (34.93)	182.65	5.96	484.13	-478.17	-2.61
Full-Time Laborer	37 (44.57)	0.00	0.00	540.75	-540.75	- ∞
Total	83 (100.0)					
Region 2	El Llano					
Capitalist /Rich	1 (1.44)	480.00	521.00	0.00	521.00	1.08
Upper-Middle	2 (2.89)	329.00	42.00	0.00	42.00	0.12
Lower-Middle	15 (21.73)	419.21	0.33	188.50	-188.17	-0.44
Poor	30 (43.47)	167.33	1.86	599.20	-597.34	-3.56
Full-Time Laborer	21 (30.43)	0.00	0.00	426.20	-426.20	- ∞
Total	69 (100.0)					

Table 1 (continued)

Region 3	Calvillo*					
Capitalist /Rich	3 (5.26)	388.33	501.00	5.00	496.00	1.46
Upper- Middle	7 (12.28)	495.85	70.57	8.57	62.00	0.12
Lower- Middle	6 (10.52)	180.00	3.00	43.00	-40.00	-0.22
Poor	13 (22.8)	158.3	0.46	779.23	-778.77	-4.91
Full-Time Laborer	28 (49.12)	0.00	0.00	455.32	-455.32	$-\infty$
Total	57 (100.0)					

Source: 1982 Agrarian Survey

[a]Labor days (family, hired in and hired out) are calculated on a per person per day basis; hired out labor refers to waged labor performed in or outside of the household. In households where petty commercial activities are involved (such as fruit and vegetable street vending) or self-employment exists within the home (such as work as a seamstress or owning a small store) and no land is held, the households have been classified as full-time laborer. Numbers in parentheses indicate percentages of total households sampled in each region.
*Two missing cases.

is not to imply that a classless structure exists in El Llano. Rather, the data reveal the inadequacy of traditional class categories--i.e., rich, middle and poor peasantry--in dealing with a region where the means of production are formally in the hands of direct producers and the wage-labor/capital relationship is universal.

In Calvillo, the data also call into question the class divisions suggested by E, particularly among the lower strata. For example, the data reveal the very subtle divisions separating the full-time proletarians from the poorest segment of the landed peasantry. On the basis of its scale of agricultural production and its dependence on the labor market (the poor hire out over 40% more labor days than the completely proletarianized), poor peasant households might be more appropriately categorized as full-time proletarians. Neither category--the proletarian nor the poor peasant--fully captures the nature of these agriculturalists.

In summary, in applying the E criterion to the Aguascalientes data a hierarchy of rural groups emerges, defined by the extent to which they buy and sell labor or use family labor on the operational holding. It is evident, however, that among the upper, lower-middle and poor peasantry, the net labor ratio yields relatively arbitrary classifications among a large cluster of households that are in reality more similar than different.

In short, while the quantitative aspects of the E ratio detect differences in the use of labor, they do not necessarily provide a qualitative measure of class. The analysis therefore suggests that the determinants of class position must incorporate more than the rural household's access to means of production and its buying and selling of labor power. This study proposes that an analysis of internal features of households provides a

critical means to move beyond traditional approaches to the study of the peasantry.

III. Rural Household Structure and Class Position

In this section we address two related questions: What is the relationship between the determinants of class position and household structure? And, more important, what are the unique analytical insights that an investigation of household structure adds to the study of class position?

In Latin America a number of recent studies have made significant contributions to a broader understanding of class. The work of Deere (1978) is one of the first and most comprehensive studies to address the links among capital accumulation, uneven development, and the division of labor by sex[11] both theoretically and empirically. Deere's work relates the extent to which rural producers are integrated into capitalist relations of production to the impact upon the internal structure of rural households. Moreover, she forcefully argues that the peasant household can only be studied in conjunction with an analysis of the larger social and economic structure. She therefore attempts to conceptualize the nature and consequences of capital accumulation on the household labor process.[12]

A succinct example of Deere's theoretical approach is as follows:

> The household labor process among different groups of
> peasants will differ according to their access to the
> means of production. The process of social differenti-
> ation will be reflected in a heterogeneous division by
> sex and age in the generation of use and exchange
> values among different strata of the peasantry. The
> outcome of the productive process will also differ by
> strata, spurring further differentiation, and in turn
> have different implications for generational reproduc-
> tion as well as household structure and composition.
> (1978:241)

Deere's theoretical construct thus ties together different levels of analysis to explain the differential impact of capitalist development in

agriculture on the internal structure of the peasant household. In this analysis "the division of labor by sex and family structure are subordinate, yet also determinant, of the class relations which encompass the social formation." (Ibid. 3).

Her case study of the Cajamarcan peasantry of Peru demonstrates the influence of social stratification on household structure and composition. Household size, for example, varies significantly among the different strata of the peasantry[13] as does household type, i.e., nuclear or extended, and appears to be correlated with access to means of production. Middle and rich peasants with sufficient land resources can effectively utilize the entire family labor force, and thus tend to have larger households and extended families. In the completely proletarianized stratum and the smallholding poor sector of the peasantry where land cannot provide for family subsistence, there is a marked tendency toward a smaller nuclear household. In these cases, the household's dependence on wage labor for subsistence promotes a strong tendency to expel working-age children.

The way in which children participate in the household labor process is also an indicator of the household's available resources. In households controlling a large animal stock, primarily the upper strata of the peasantry, children are entrusted entirely with animal care. In better-off households, however, children do not constitute a significant proportion of workers involved in direct agricultural production because these households can afford to employ wage labor. Among the smallholding poor sector of the peasantry, in contrast, young children do represent a substantial portion of the household's labor force, indicating that familial labor constitutes the primary means to undertake production.

Deere also outlines how women's roles in production and reproduction[14] are correlated with household class. While noting that all peasant women are charged with the myriad tasks of daily maintenance and childrearing, she finds that the nature and extent of women's work in production varies widely across social strata.

One factor that affects women's involvement in productive activities is the degree to which the household participates in the labor market. In the smallholding minifundista stratum, where wage earnings constitute an important part of total income, women participate in agricultural production to a greater extent than women of other social classes. Deere finds that the proletarianization of the male head of household, in particular, has led to the mother's increased participation in subsistence agriculture.

Poor peasant women's greater participation in agricultural activities also indicates this sector's tenuous hold on the means of production and impoverished status. Households with insufficient land employ as many family members as possible in production, women and children included, in an attempt to provide for subsistence needs through farm activities alone. One outcome of peasant differentiation then is a breakdown in the traditional division of labor among households with declining access to productive resources (Deere and León de Leal, 1981).

A recent study of two rural communities in Mexico (Arizpe, 1980) lends further support to the notion that class position is affected by the internal composition of the household group. Arizpe's empirical findings suggest that peasant families with considerable access to land and other means of production differ from smallholding or poor peasant households in their internal make-up. Like Deere, she finds that more extended households

exist among landholding units of production with greater resources. In contrast to Deere's work, however, this case study finds that poorer households tend to retain a larger number of children at all stages of the domestic life cycle, as measured by the age of the senior woman of the household. She hypothesizes that poor households need to retain household members to engage in productive activities in order to counteract their precarious economic situation.

Young (1978), also working in Mexico, focuses on changes in modes of production, the development of class society and the sexual division of labor. She postulates that the development of capitalism in agriculture has had uneven effects on women's roles in production and reproduction. More precisely, she argues that the transformation of agrarian structures has led to class stratification, which in turn has resulted in a new and sometimes contradictory sexual division of labor both within and outside of the peasant household.

Although this restructuring of women's roles permeates all classes of the peasantry,[15] its effects vary significantly within each peasant stratum. The most severely affected are poor and landless women. These women work harder and longer days as they struggle to meet basic subsistence requirements. In addition to attending to domestic production and other household tasks, they work as wage laborers for wealthier peasant families.

The women of the middle peasantry also experience the burden of the double day, performing nonremunerated tasks on the family plot on top of their daily household chores, particularly during harvest periods. In sharp contrast, rich peasant women do no agricultural work and domestic

servants relieve them of onerous household chores. Rather, these women engage in supervisory tasks or take charge of the family business.

Young also stresses the interplay between women's productive and reproductive roles. One of the consequences of the social transformation brought about by the penetration of capital, is an increase in family size. With the disappearance of reciprocal labor exchange, peasant households have to depend to a greater extent on their own labor resources, thus placing greater emphasis on women's reproductive capacities. For households dependent on wage labor for survival, a large family may provide more potential income earners, thus benefitting the household as a whole. This situation, however, has potentially deleterious effects on women by increasing their work load in both wage and nonremunerated domestic labor.

In summary, the studies discussed consider the differential impact of capitalist relations of production on rural households; all give analytical priority to questions of class structure. Class, however, has not been defined in narrow economic terms. Rather, such factors as the sex and age division of labor, household composition and size, and the family life cycle have been shown to interact in complex ways with other economic variables that determine class status. The important point to be stressed here is that these household features are class-specific and vary according to the social relations of production within each stratum (Deere, 1978).

Clearly, then, an analysis of the diverse structural dimensions of rural households deepens our understanding of class position. Housework and agricultural production, differential participation in the labor market, the employment of wage workers versus the use of unpaid family labor in the production process, and the unequal sex and age division of

labor are all interrelated and all provide fundamental insights into the question of household class status.

Significantly, the analysis of household structure and organization shows the interrelationships between economic stratification and women's subordinate roles in productive and reproductive activities. By considering external and internal household factors, one can relate the existence of an unequal gender and age division of labor to capital accumulation and proletarianization among the peasantry. Moreover, while the nature of the productive work households engage in is closely related to material conditions, an analysis of the internal structure of rural household reveals how that work is divided between the sexes.

IV. An Alternative Empirical Approach to Class Structure

This section arrives at an empirical understanding of the notion of class proposed above. Class characteristics and divisions among rural households are defined within a multivariate approach incorporating numerous relationships cited in previous sections: ownership of the means of production, the buying and selling of household labor power, and internal structural features of rural households. A factor analytic test is applied to the survey data to determine empirically the structural characteristics of economic groups in the rural sector. In addition, the factor test yields a composite measure of class structure, supporting the existence of an unequal and differentiated agrarian sector.

The section begins with a brief description of the factor analysis procedure and discusses the data used in the analysis. Then it presents and interprets the findings of the factor tests and, finally, the results are used to categorize rural households in the Aguascalientes survey into distinct groups.

Methodology. The object of factor analysis is to group variables linearly into smaller sets of hypothetical variables or "factors."[16] It assumes that some underlying constructs, which are fewer in number than the set of original variables, are responsible for the covariation among the defined variables (Kim and Mueller, 1978). By transforming a set of observed variables into a set of factors it is expected that important relationships will emerge that may not otherwise be clearly discernible (Nie, et al., 1975). As Oster (1979:33) notes: "A satisfactory solution is one in which the generated factors convey all the essential information of the original set of variables."

For the purposes of this study, where a composite measure of agrarian class structure is sought, the factor technique suggests a possible means to differentiate rural households. To this end a set of variables relating to household class position is generated. The factor technique is then employed to give structure and clarity to this broad range of class characteristics by extracting a small number of theoretically coherent factors.

Principal component analysis was the factor method chosen for the present study. In principal component analysis the factor solution is undertaken with unities in the main diagonal of the correlation matrix to render exact mathematical transformations of the observed variables. This method makes no assumptions about the general structure of the variables. What is sought is the linear combination of variables that best accounts for the overall variance in the data. The principal component model is succinctly expressed as:

$$z_j = a_{j1}F_1 + a_{j2}F_2 + \ldots a_{jn}F_n$$

where each of the n observed variables, z_j, is described linearily in terms of uncorrelated factors or components F_1, F_2 ... F_n, each of which is in turn defined as a linear combination of the n observed variables.

Variable Definitions. It is postulated that the household's access to the means of production along with the extent of its integration into the labor, product and credit markets represent fundamental determinants of class status (de Janvry and Deere, 1979). It is further postulated that these determinants are themselves affected by households' internal structure and composition. The following paragraphs discuss the definitions and rationales of these variables. (See Table 2 for a complete listing and description of the variables included in the factor analysis.)

While our theoretical framework guides the choice of variables to be considered in the analysis, examining the special regional characteristics of the data provides the general direction (expected signs) and location of highly correlated variables expected to emerge from the factor test. In short, the factor analysis should more concisely reveal the parameters of previously specified relationships. The variables address features of landed and landless households.

Among landed households, the existence in all three regions of two highly differentiated types of agricultural production--basic crops produced on rainfed land and commercial crops on irrigated land--suggest including the variables RAIN and IRR to measure this dichotomy. These variables contain more information about the household's wealth status than a simple measure of the total area owned by the household. It is expected that these two variables are negatively correlated and further, comprise two independent trends or factors in the analysis.

Similarly, the variables OXEN and INSTR are expected to be linked to distinct types of rural producers, the former a characteristic of subsistence producers where households depend on draught animals rather than mechanized instruments for production, and the latter, a measure of capital intensity indicating a high degree of integration into capitalist commercial agriculture where mechanized instruments dominate the production process. CROP and FARM should also be linked to different types of rural producers. The cultivation of staple crops (CROP), a characteristic of subsistence farmers, and the household's involvement in market relations (FARM) are expected to be inversely related.

DEBT is expected to be highly and positively correlated with other indicators of "commercialness" in the rural sector. In commercial agriculture large investments in means of production require access to public and private credit markets. NETLBR, the E ratio criterion, is inserted to determine its usefulness as an indicator of class structure in a multivariate context. A measure of the degree of participation in the labor market, it requires that capitalist households, where the household participates in the labor market primarily as a buyer of labor power, be associated with a high and positive loading. On the other hand, in households where hired out labor predominates, the net labor ratio should contain a negative sign.

BEAST, an index of the household's stock of nonwork animals, represents both an additional source of farm income and a means to meet basic subsistence requirements. Consequently, it is not a variable that is expected to characterize one particular type of production unit but may serve as a continuous measure of one dimension of household wealth.

Table 2
Variable List and Description for
Factor Analysis

Variable	Description and Units
RAIN	Rainfed land in use on the operational holding, hectares per household
IRR	Irrigated land in use on the operational holding, hectares per household
NETLBR	Net Labor Ratio, ratio of labor days hired in minus hired out to family days on the operational holding
Y	Gross annual household monetary income, pesos per household
CROP	Yield of staple crop output (corn and beans) per hectare
BEAST	Index of nonwork animals (cows, pigs, chickens and sheep) owned
DEBT	Stock of household debt, pesos per household
OXEN	Number of animal team days input per hectare
FARM	Percentage of total income derived from sale of agricultural goods
INSTR	Value of capital stock per hectare, mechanized instruments of production and other non-mechanized tools used in the production process
TOOL	Value of instruments used in craft or petty commercial production (landless households)
EXT	Percentage of adults (over 15 years of age) not related to immediate conjugal unit
PROD	Percentage of household income earners and persons involved in production on the land who are women and children (under 15 years of age)
EARN	Percentage of household income earners who are women and children (landless households)
PTN	Percentage of household members within potential migrant pool, ages 15-59
DC	Domestic life cycle, age in years of senior woman of household

Table 2   (continued)

GND   Percentage of household members between 15 and 59 that are
             male

AGE   The number of people in the age group in which migration is
             most likely (ages 20-35) as a percentage of total number of
             potential migrants (ages 15-59)

Although it has not been included in the theoretical construct of class presented above, an income variable, Y, is included in the factor design. It is inserted primarily because it is traditionally used as an indicator of socioeconomic status; it is not anticipated how Y would emerge in the factor test.

The remaining variables, PROD, EARN, EXT, PTN, DC, GND and AGE quantify the internal demographic features of rural households. EARN and PROD, measuring the sex and age division of labor, capture features of rural households least integrated into commercial relations of production. For example, high participation rates of women and children in productive work--both in wage labor and in farm activities--reflect the household's need to meet subsistence requirements where means of production are inadequate or nonexistent. Consequently, PROD and EARN should be strongly and positively associated with households at the lower end of the class scale. At the other extreme, in the upper strata of the peasantry, a more rigid sex division of labor may confine women to domestic chores and men to farm responsibilities. Thus PROD should be negatively correlated with an upper strata of landholding households.

EXT measures whether the household unit tends toward a nuclear or an extended family structure. In this study, we would expect nuclear households to emerge among the upper strata of the peasantry and the landless; extended households would be strongly associated with a poor sector of the peasantry. The remaining variables in the analysis, PTN, DC, and GND[17] also test the possibility that a particular household size (PTN) and composition (GND), and stage of the domestic life cycle (DC) are related to features of class.

While the economic structure of landed households can be readily spelled out, the same is not true for completely proletarianized households. The literature on economic differentiation within the peasantry tends to treat this social group as one separate and distinct unit, thus providing little guidance on the existence of segments within the landless sector. In this study income differences and differences in household structure and composition that may capture significant class distinctions are expected to emerge among landless households. Whether such differences enable us to identify sub-strata within the landless group will be investigated subsequently. A factor analysis of these households therefore explores underlying structures; no prior specification of factor patterns or the dimensions of loadings is assumed. Of the eighteen variables listed in Table 2 only nine showed sufficient variability to be factor analyzed on landless households: BEAST, TOOL, EARN, EXT, PTN, DC, GND, AGE and Y.[18]

Results of Factor Analytic Tests. This section presents and interprets the factor analytic tests on landed and landless households. Using the principal components method, only the first four factors were extracted for landholding units; four factors were also extracted for landless households.[19] Varimax orthogonal rotation, a rotation technique that simplifies the columns of the factor matrix, was then applied to the factor solutions in order to achieve simpler and theoretically more precise factor patterns.[20] Tables 3 and 4 show the results of the rotated factor matrices. The following subsections deal with the factors extracted in each of the two major rural groups.

LANDED HOUSEHOLDS

Factor I: Commercial Agriculture. The first factor confirms the existence of a commercial element within the landholding sector of the

peasantry. Factor 1 loads[21] significantly and positively with the expected signs on the variables most strongly associated with agricultural commodity production: IRR, NETLBR, and INSTR. Irrigated land, the employment of wage labor in the production process, a high percentage of income derived from agricultural sales, and mechanization are the most salient character-istics of commercial agriculture in the three study regions. NETLBR and FARM, the variables with the highest loadings, 0.78 and 0.80 respectively, particularly mark this factor as an indicator of commercialness.

The variable BEAST, an indicator of the household's animal stock, also loads positively on this factor. The positive loading on DEBT, although less significant, further confirms an expected relationship between access to financial markets and rural commodity producers.

Additionally, one important household structure variable emerges associated with factor I, providing a first indication of the linkages between internal household structure and class type. The significant nega-tive loading on EXT indicates that extended household units are not charac-teristic of the upper stratum of the peasantry, strongly confirming our earlier supposition that household type relates in a significant manner to specific strata within the rural sector.

Factor II: Subsistence Agriculture. In contrast to factor I, factor II loads most strongly on those characteristics associated with use value production by a poor stratum of the peasantry. Highly significant loadings on RAIN, CROP and OXEN concisely point to the strong link among production on rainfed land, subsistence crop output, and the use of animal power for cultivation.

The significant and negative loadings on IRR and DEBT further substan-tiate the noncommercial dimension of factor II. Interestingly, NETLBR is

not a significant element here. FARM, another key determinant of commer-
cialness in factor I emerges inversely, albeit insignificantly, correlated
with indicators of subsistence producers in factor II. As in factor I,
BEAST contains a positive and significant loading. The fact that it loads
on both factors I and II, however, suggests that BEAST may not be a vari-
able uniquely characteristic of one rural group, thus limiting its useful-
ness in differentiating strata within the landholding sector of the
peasantry.

Finally, factor II draws attention to the fact that an important
household structure variable relates strongly to the overall pattern con-
tained in the subsistence domain. The high and positive loading on PROD
elucidates the significance of women's and children's contribution to wage
and nonwage productive activities among households least integrated into
market production. The findings lend further support to the hypothesis
that the sex and age division of labor assume specific characteristics
according to class type.

Factor III: Household Structure. This factor largely defines a
dimension of landed units of production associated with household structure
and composition. The highly positive loadings on DC and PTN reflect a sig-
nificant association between the measures of the domestic life cycle and
the dependency ratio. EXT also emerges significantly and positively
related to DC and PTN. Additionally, this factor loads significantly on
BEAST and OXEN, although with smaller loadings than for the household
structure variables.

The loadings on this set of variables indicate that factor III also
provides key information that helps to define and distinguish strata within
the landholding sector of the peasantry. First, the positive association

Table 3
Rotated Factor Matrix: Landed Households

Variable	Factor 1	Factor 2	Factor 3	Factor 4
RAIN	.03	.73*	.17	.10
IRR	.64*	-.44*	-.03	.35*
NETLBR	.78*	-.24	-.10	-.23
Y	-.10	.02	.28	.75*
CROP	-.10	.64*	-.13	-.10
BEAST	.54*	.43*	.38*	.17
DEBT	.31*	-.42*	.12	-.00
OXEN	.19	.56*	.34*	-.37*
FARM	.80*	-.25	-.05	.23
INSTR	.39*	.10	-.14	.72*
EXT	-.32*	-.05	.41*	.27
PROD	-.14	.62*	-.27	.17
PTN	-.11	-.12	.68*	.11
DC	.03	-.00	.79*	-.05
GND	-.29	-.03	.04	.00

Table 4
Rotated Factor Matrix: Landless Households

Variable	Factor A	Factor B	Factor C	Factor D
BEAST	-.00	.77*	-.04	.10
TOOL	.10	.74*	.14	.40*
EARN	.10	-.47*	.48*	.20
EXT	.11	.20	-.11	.89*
PTN	.73*	-.21	.10	.10
DC	.04	.00	.89*	-.12
GND	.67*	.41*	-.29	-.39*
AGE	.60*	-.28	-.56*	.05
Y	.72*	.22	.10	.13

* Indicates statistically significant loading.[22]

among the three household structure variables suggests that the extended (and perhaps larger) family structure correlates strongly with households where the number of potentially productive individuals outnumbers dependents. In turn, the extended household type and a high dependency ratio emerges, associated with an older female head of household. Second, the loading on OXEN--a robust indicator of subsistence units in factor II-- provides an initial indication that the household type described by DC, PTN and EXT pertains to a subset of households within the least commercialized sector of the peasantry. Moreover, the inverse relationship between EXT and the variables defining commercialized production units in factor I also suggests that factor III most aptly characterizes a group of households associated with subsistence production.

Factor IV: Wealth. This last factor describes a wealth dimension of the landed peasantry. With highly significant loadings on Y and INSTR-- 0.75 and 0.72, respectively--factor IV correlates high household incomes with access to nonland means of production, particularly mechanized instruments of production. Further, these two variables are positively associated with IRR, a characteristic of commercial units of production, and negatively related to OXEN, an indicator of subsistence producers.

LANDLESS HOUSEHOLDS

Factor A: Household Structure/Income. Factor A links household structure and income to describe a dimension of landless households. The significant and positive correlation between PTN, GND, AGE, and Y suggests that for households completely divorced from the means of production income level is significantly correlated with household structure and composition.

Income emerges as a key defining characteristic of the landless stratum precisely because households lack productive resources and wage labor constitutes the primary means to secure reproduction requirements. The household structure components associated with income in factor A demonstrate the important connection between landless households' dependency on wage labor and internal household characteristics. Among the landless, the existence of multiple wage earners as measured by PTN, in conjunction with a specific sex (male) and age composition (20-35 years) of the household, contribute greatly toward the household's ability to meet a given income level.

Additionally, it is important to note that the household structure characteristics of factor A (with the exception of PTN) differ from those defining subsistence units of production (factors II and III), again providing further evidence that the internal structure of rural households varies according to class type. For example, among the poorer stratum of the peasantry, women's and children's participation in productive activities sharply defines the household's need to meet subsistence requirements through the labor of many of its members. In contrast, the household type depicted in factor A suggests that men's income earning activities constitute the dominant aspect of landless households.

Factors B, C, and D. These three factors do not appear to contribute greatly to a further specification of landless households. Factor B, for example, constitutes a possible means of production domain with highly significant and positive loadings on BEAST and TOOL. It also loads, although less so and negatively, on EARN, a variable associated with women's and children's financial contribution to household income. Factors C and D load most strongly on factors associated with the internal structure of

households, DC with a loading of 0.89 on factor C and EXT, also with a loading of 0.89 on factor D. In short, while these last three factors point to isolated features of the internal demographic structure of landless units, none of them provides sufficient material to define additional dimensions of the landless sector.

An Empirical Typology of Rural Groups. By examining the distribution of factor scores on landed and landless households, a typology of rural units is constructed according to the degree of a household's integration into commodity relations of production.

Of the four factors describing different dimensions of the landholding sector of the peasantry, factor I, and factors II and III jointly most precisely capture the uneven character of agricultural production in the study regions. Factor I highlights characteristics associated with producers highly integrated into commodity relations. Factor II illustrates elements of landholding units associated with less integrated agriculturalists while factor III reveals more specific household structure and composition traits of these producers.

In reality these three dimensions are integral parts of the same phenomenon, that is, the uneven process of capitalist development in agriculture. By capturing strong indicators of "commercialness," however, factor I appears to depict the most acute differences among landed households. The findings on factor II, on the hand, may not clearly indicate marked divisions within the landed strata, primarily because the most economically advanced sector of the peasantry—as measured by the variables loading strongly on factor I—may additionally contain significant high-order elements defining factor II, namely, rainfed land (RAIN) and basic crop output (CROP). Factor III may also be less useful in yielding theoretically

meaningful divisions among rural units since it most strongly defines additional features of subsistence households. Analyzing the factor structures on factors II and III, however, may provide a means to differentiate among subsistence households. The following discussion investigates these hypotheses by first examining factors I and II for their potential in dividing the rural sector into major class types and then exploring factors II and III for further divisions.

The factor score distributions[23] on factor I, which measure the relative position of each case or household with respect to the factor, yield a composite index of commercial agriculture production, with a positive score indicating that a case contains characteristics of commercialness and a negative sign indicating the opposite. With respect to factor II, a negative loading implies the features do not define subsistence units of production, but not necessarily that they do define the most commercial units.

Figures 1 and 2 give the factor score distribution on factors I and II, respectively. As expected, factor II shows a relatively continuous pattern of factor score distributions across the spectrum of cases. Factor I, on the other hand, contains sharp discontinuities. In particular, at the point on the graph indicated by 0.87, there is a relatively large gap in the distribution of scores: 0.96 is the smallest value within the subset of cases at the high end of the scale; 0.77 is the score on the following case. Above this point, 26 cases, or 20.8% of the total number of rural units, are highly integrated into commodity production relations.

It thus appears that 0.84 constitutes a reasonable cut-off point between two major types of households within the landholding rural population, one grouping a minority of households highly integrated into market

relations of production, and another accounting for the vast majority of rural units, containing producers only marginally involved in commodity production.[24]

Although the analysis provides evidence that two major class types characterize the rural sector, the information contained in factors II and III suggests that further differentiation within the subsistence sector may exist. Moreover, further analysis tests the hypothesis proposed by alternative specifications of rural class structure, i.e., the E ratio, that marked class divisions also exist within the noncommercial group.

To test the multiple differentiation hypothesis, the 26 commercial households are removed from the sample of landed units, leaving the 99 subsistence households. Then, following the procedure carried out on factor I, the distribution of factor II and III scores on the subsistence households are scrutinized for cut-off points. In addition, the distribution of scores on the E ratio within the group of 99 subsistence households is shown in order to test for the existence of different groups according to that ratio. Figures 3 and 4 give the distribution of scores on factors II and III, respectively. Figure 5 presents the results obtained from the E ratio distribution.

Figure 3 shows a break at -0.97 providing some evidence that a small group of households may constitute a distinct subset within the subsistence sector. The distribution of factor III scores on the same households shown in Figure 4, however, shows no dramatic breaks. The distribution of E ratio scores given in Figure 5 shows two distinct groups. The six households at the tail end of the distribution all correspond to the "middle peasant" class. Regionally, four of these households are located in Calvillo and the remainder come from El Llano. An examination of factor II
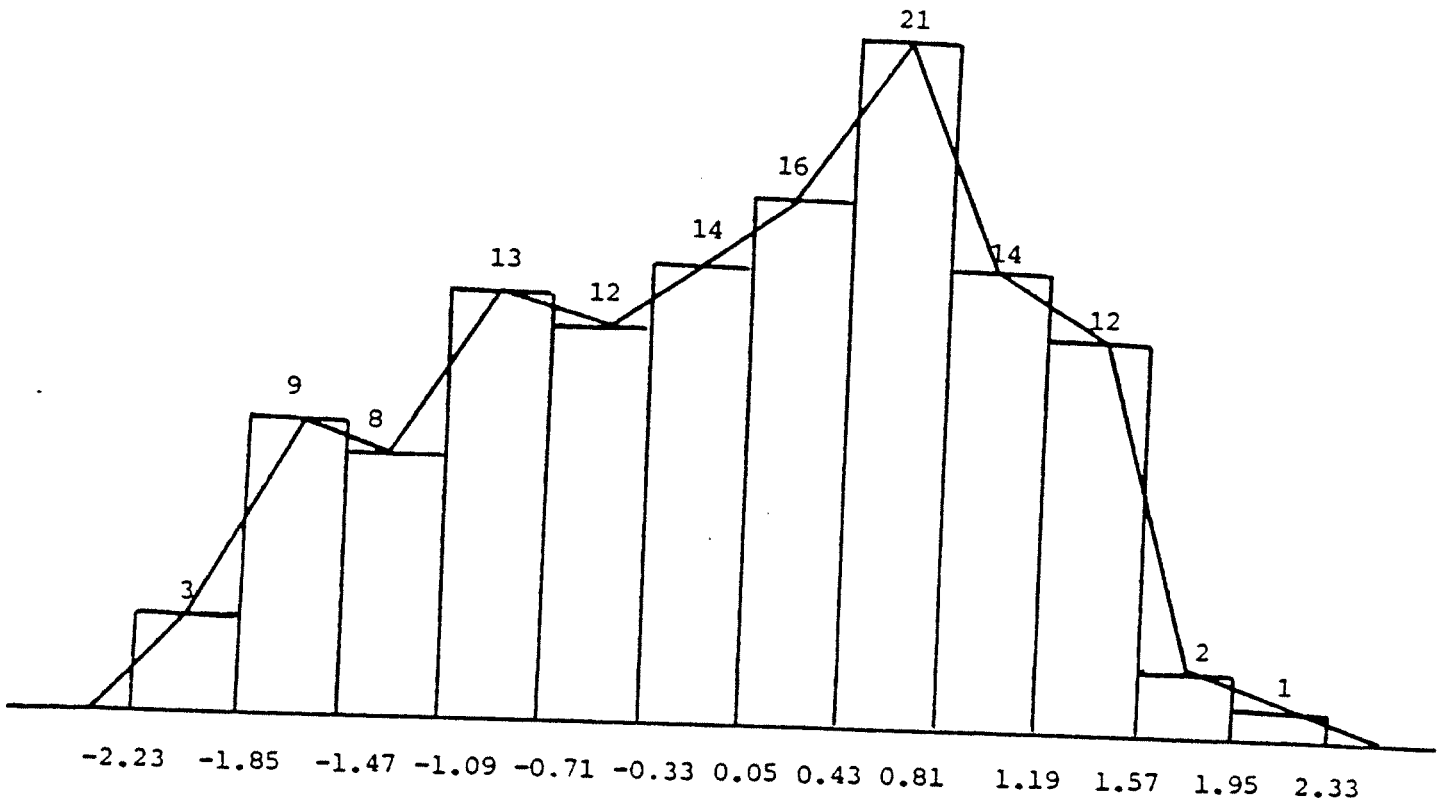
Figure 1

Distribution of Factor Scores on
Landed Households
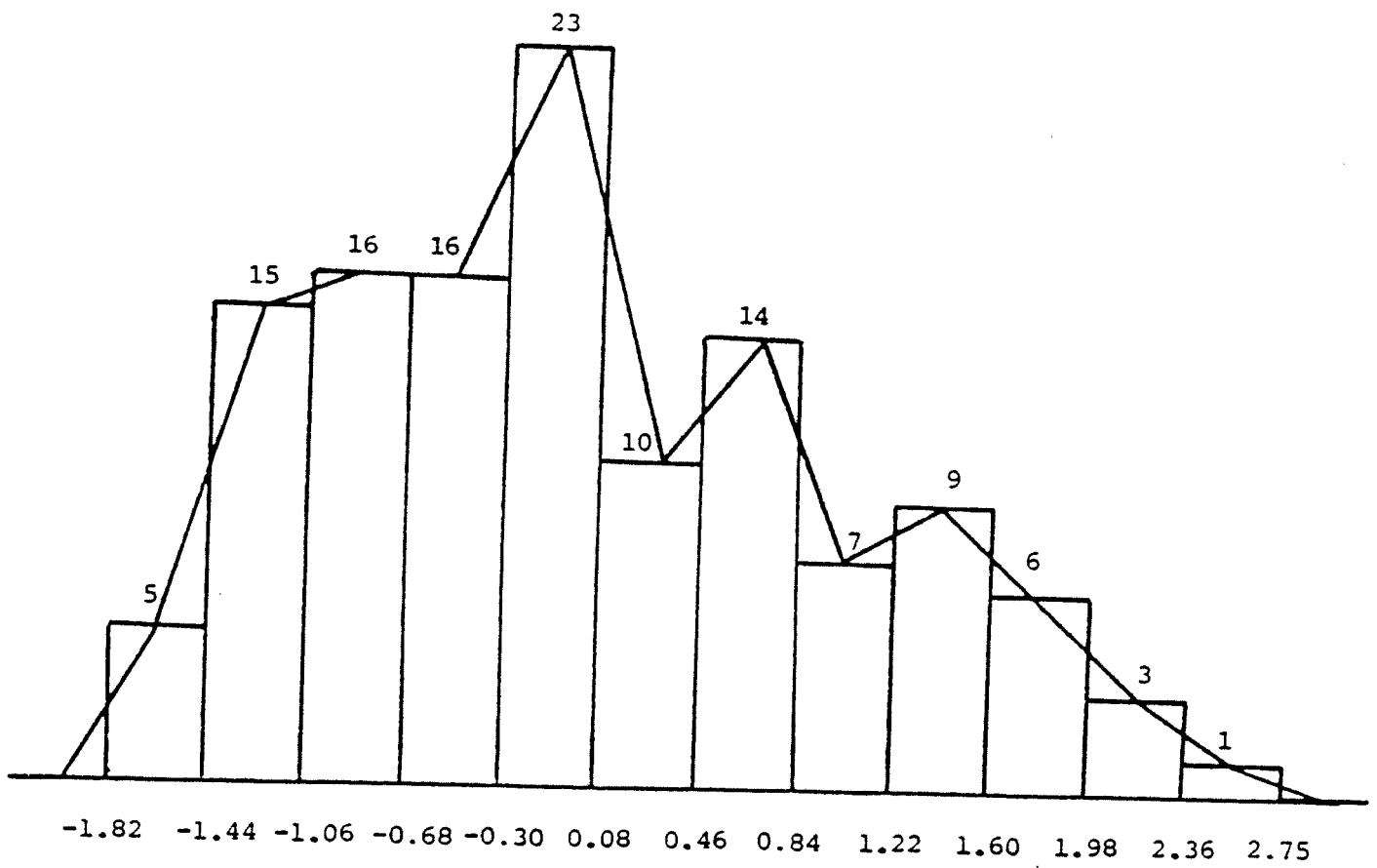
Factor I: Commercial Agriculture

Figure 2

Distribution of Factor Scores on
Landed Households

Factor II: Subsistence Agriculture

and III scores, however, shows no particular patterning of these six households either at the upper or lower end of the scales.

On the basis of these tests it appears that little qualitative differentiation exists within the subsistence sector. Several of the exercises reveal that a small number of households are more or less set off from the vast majority of subsistence units with the E ratio distribution illustrating that differentiation may be more pronounced in Calvillo then El Llano or El Valle. Overall, however, no substantive differences emerged to pinpoint a distinct class type. Clearly, the results do not indicate that the subsistence sector constitutes a homogeneous mass but rather that over a broad range of characteristics these households are more similar than different. In short, further discussion and analysis are necessary in order to argue that the least integrated sector of the peasantry can be categorized into a variety of class types.

Because of the non-specificity of factors B through D on landless households, factor A--reflecting household structure/income--was chosen to explore for possible differences within this stratum. Initial inspection of the distribution of scores (see Figure 6) on factor A shows cases concentrate toward the center of the distribution; no major breaks emerge to suggest significant divisions within this group. Descriptive statistics also indicate that the distribution approximates a normal one: skewness = 0.85 and kurtosis = 0.43. A look at the sequence of scores gives no indication of major breaks as found among landholding units.

The results of the factor tests thus suggest that "commercial," "subsistence" and landless households constitute the three principal class types in Aguascalientes' agrarian sector. Table 5 shows the class composition of rural groups by region. The evidence presented in this table

Figure **3**

Distribution of Factor II Scores on "Subsistence" Households
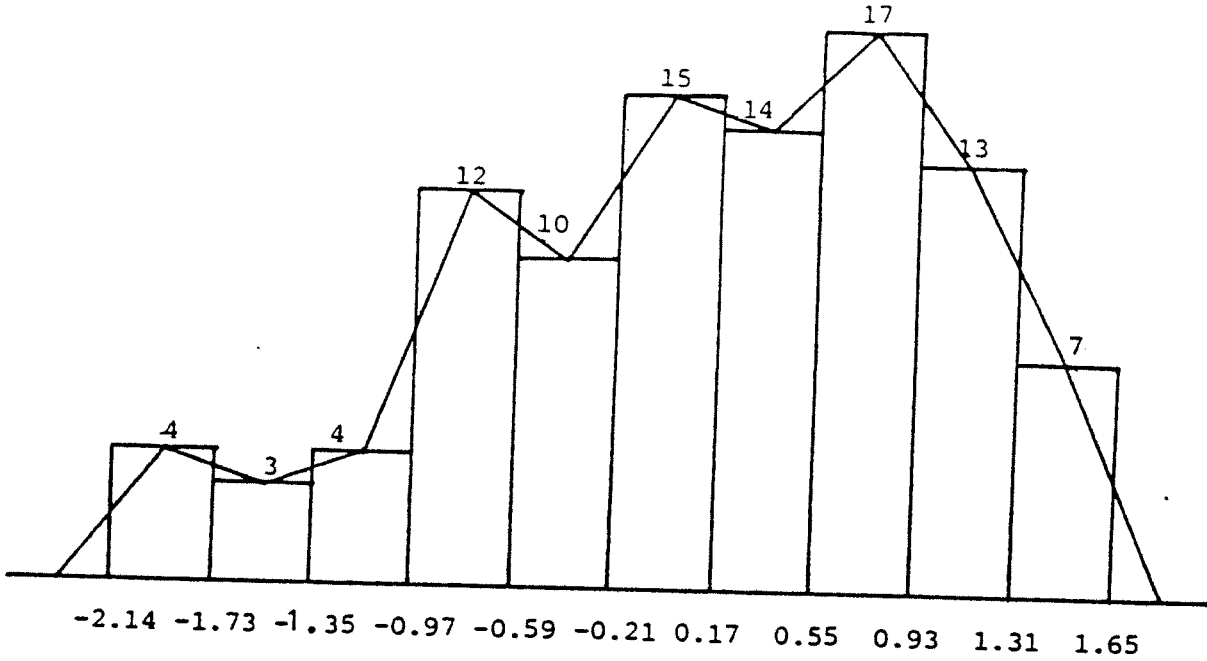
(99 cases)

Figure 4

Distribution of Factor III Scores on "Subsistence" Households
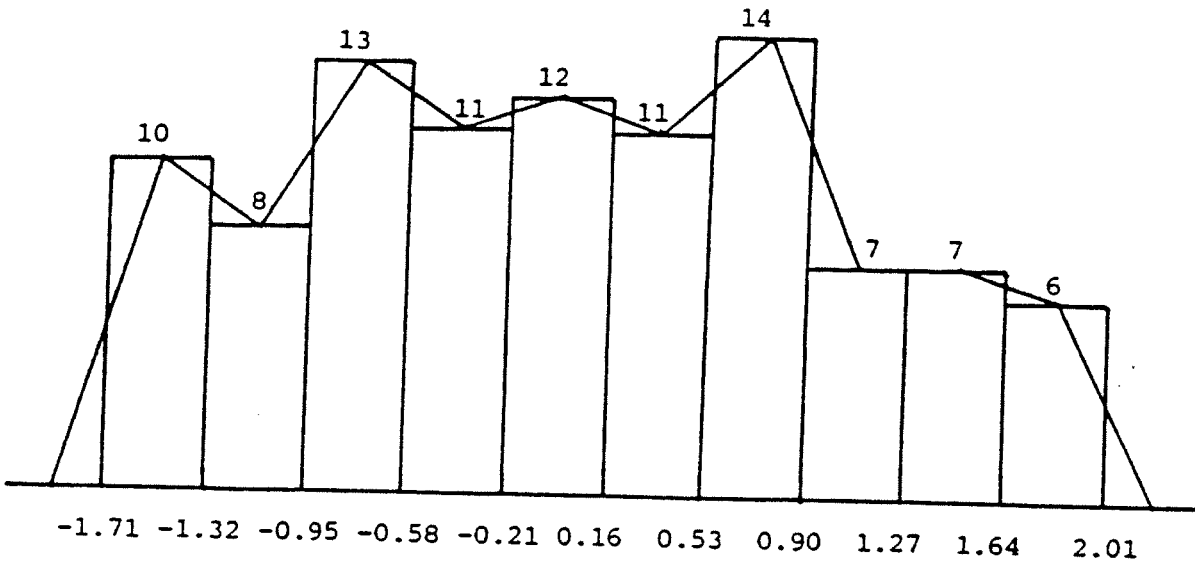
(99 cases)

Figure 5

Distribution of E Ratio on "Subsistence" Households
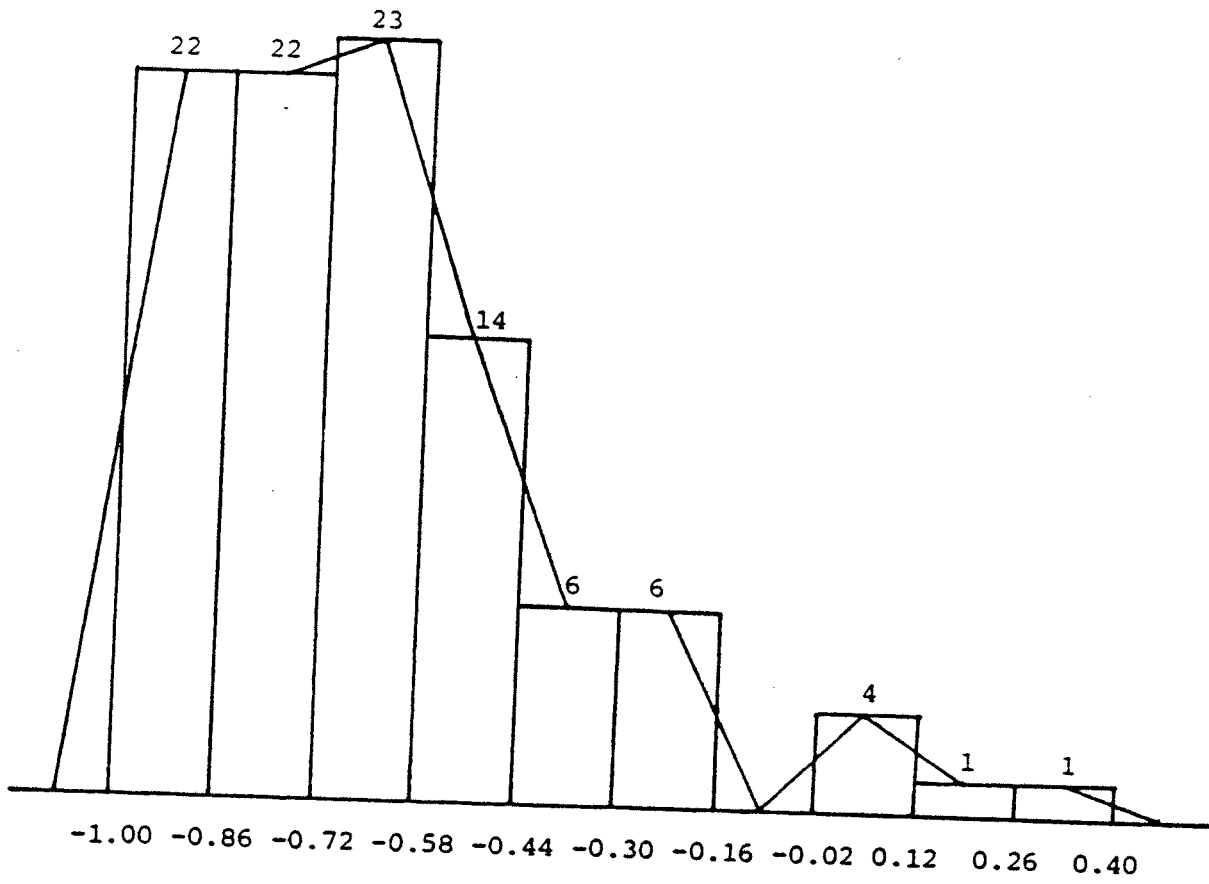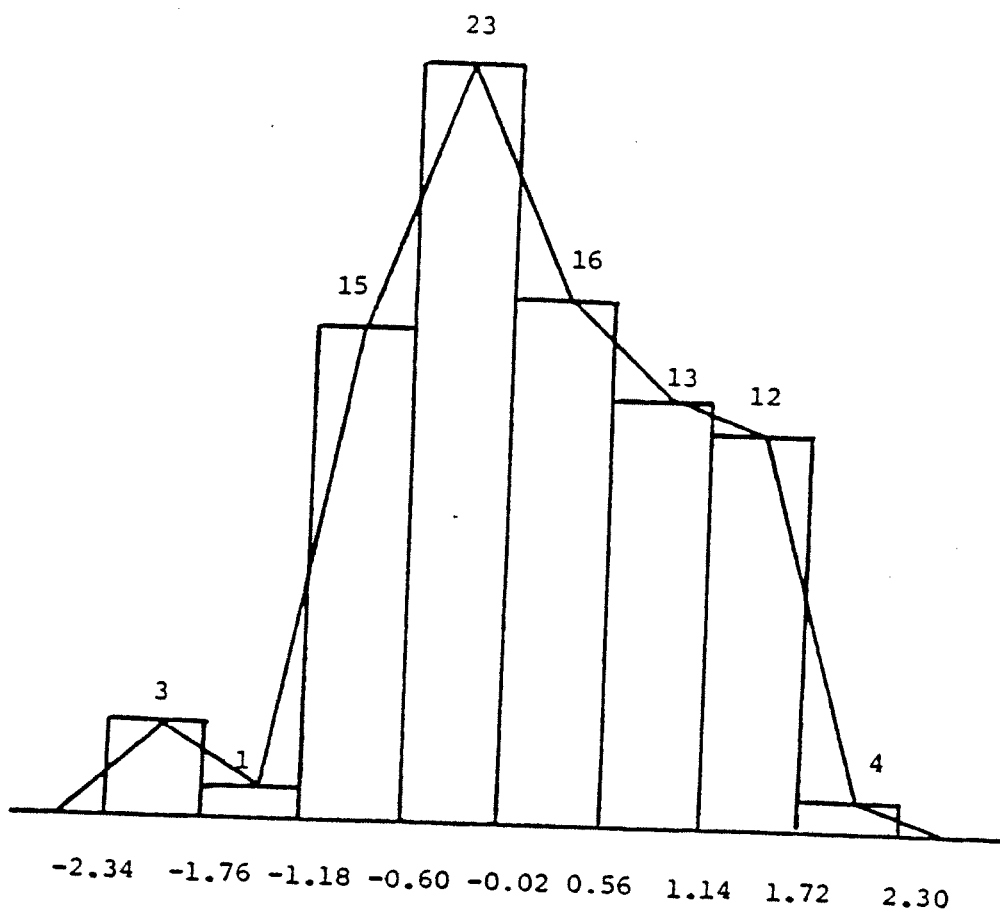
(99 cases)

Figure 6

Distribution of Factor Scores on
Landless Households

Factor A: Household Structure/Income

Table 5

Regional Classification of Rural
Groups using Factor Results

Region	Class Type	Number of Households
El Valle	Commercial	13 (15.66)
	Subsistence	33 (39.76)
	Landless	37 (44.58)
	Total	83 (100.0)
El Llano	Commercial	6 (8.69)
	Subsistence	42 (60.87)
	Landless	21 (30.44)
	Total	69 (100.0)
Calvillo	Commercial	7 (11.86)
	Subsistence	24 (40.68)
	Landless	28 (47.45)
	Total	59 (100.0)

Source: 1982 Agrarian Survey

supports the nature of regional differentiation, further strengthening the meaningfulness of the factor analytic results. First, the dominant class forms a relatively small percentage of the total number of households in each region. Second, subsistence households constitute the largest percentage of rural units in El Llano. On the other hand, the percentage of both commercial and landless households is much higher in El Valle and Calvillo than in El Llano.

V. Conclusions

This paper began with a consideration of theoretical issues in the determination of agrarian structure in Mexico that underscored the importance of a class-based analysis. The typologies and theoretical perspectives presented located the subsequent empirical investigation within a broader framework.

Patnaik's net labor ratio was employed to determine economic divisions among rural groups based on a comparison of the buying and selling of labor power with the number of household labor days spent on the operational holding. This approach yielded problematic delimiters in the three study regions.

We then discussed the singular contribution of household structure to an analysis of class position. It was suggested that differential incorporation into capitalist production relations, based on access to land and other productive resources, was one major source of differences among households' internal structures. Understanding the dimensions of household structure and organization revealed the nature and consequences of uneven development not only on particular households but also on particular individuals within households.

The effects of proletarianization on rural groups at the lower end of the agrarian class structure, for example, included the intensification of women's labor in paid and unpaid work, and productive and reproductive activities. It is this kind of insight into intrahousehold dynamics that sharpens the analysis of class structure by revealing how and which household members are most vulnerable to and marginalized by changes in the unit's productive base. Moreover, it is precisely these factors that are concealed in analyses that consider either ownership of the means of production or the buying and selling of labor power as primary class indicators. By incorporating household structure and organization into the analysis, we can observe how the specific functions that individual household members fulfill directly affect the economic structure of rural units. Consequently, we argue that household structure and composition variables offer significant insights into class status and class differentiation.

The factor analytic tests on landed and landless households strongly supported the theoretical premises of this study. The results suggest that three major groups constitute the agrarian sector in the areas under study: a small sector (26 households) highly integrated into commercialized agriculture, a large group (99 households) confined in varying degrees to subsistence cultivation of staple crops for personal consumption, and an equally large group (86 households) entirely devoid of means of production, i.e., the landless.

The particularly sharp break evidenced between the two groups of landed households calls into serious question the usefulness of univariate analyses that pinpoint an array of different producers but do not clearly establish them as members of distinct social classes. The findings of this study--that direct producers can be categorized into two major groups--do

not, however, legitimize theories that analyze capitalist agriculture against an undifferentiated peasant sector. Rather, the findings thus far give reasonable support to a process of agricultural development where integration into capitalist commodity relations assumes highly uneven forms. Undoubtedly, the debate on the existence and nature of social classes within the rural sector remains open. This study, however, has contributed to the understanding of class stratification by arguing for an expanded notion of class and presenting empirical results that provide a solid foundation for differentiating rural groups.

NOTES

[1]The other side of this argument contends that capitalist agriculture needs to exploit the peasant economy in order to guarantee and reinforce capitalist expansion. In other words, the peasantry must be continually reproduced to ensure both capital formation and accumulation.

[2]The descampesinistas largely rely on the class categories developed by Lenin (1972). In his analysis of Russian agriculture, Lenin distinguished among rich (well-to-do), middle and poor peasants on the basis of whether they bought wage labor or sold their labor power in order to subsist.

[3]See Foladori (1981) for an incisive critique of the campesinista position. See Bartra (1979) for an equally forceful critique of the descampesinista perspective.

[4]The contemporary Marxist debate on class structure in India has also given rise to an array of theoretical (and political) positions. Different schools of thought have discussed the agrarian question in terms of capitalist, pre-capitalist, semi-feudal, colonial, post-colonial, and dual modes of production. See Thorner (1982) for an excellent review of the main issues of the debate on Indian agriculture.

[5]To date, the diversity and sophistication of the Mexican debate on rural class structure has been restricted to theory. Those concerned with empirical applications have largely relied on, and have been limited by, traditional census categories or the CDIA study.

[6]It should be clear that Patnaik's E, as a quantified measure of exploitation, does not correspond to the rate of exploitation or S/V defined by Marx (1975) as the ratio of surplus value to the variable capital.

[7]Patnaik's original equation specifies an additional type of (indirect) labor relations: renting-in or -out of land where labor is indirectly appropriated through rent payments. In this study Patnaik's land-renting concept in classifying rural households is not considered for two reasons. First, leasing-in and -out of land was not easy to document in the state partly due to ejidatarios' reluctance to reveal land renting practices. Second, and more important, Patnaik has not employed a rigorous empirical application of the theory of rent.

[8]See Crummett (1984) for a detailed description and analysis of the three study regions as well as survey methodology.

[9]In my agrarian survey of Aguascalientes the capitalist and rich peasantry comprise a single class. This seems an appropriate conflation because these upper strata of the cultivating population evidence a homogeneous social and economic structure vis-à-vis other classes. Additionally, the capitalist units of production surveyed in the three regions have not reached a level in which the division of labor can be characterized by an absolute separation between manual labor and

supervisory tasks; thus the concept of a pure capitalist as defined by Patnaik does not hold.

[10]See Shanin (1977) and Crummett (1983) for more general critiques of Patnaik's empirical analysis of class differentiation within the peasantry.

[11]Young (1978:125) defines the sexual division of labor as: "the system of allocation of agents to positions within the labor process on the basis of sex, and a system of exclusion of certain categories of agents from certain positions within social organization on the basis of sex, and lastly as a system of reinforcement of the social construction of gender."

[12]Deere (1978:247) defines the household labor process as consisting "of the set of activities carried out by family members in order to produce the peasant household's necessary consumption. Necessary consumption includes the reproduction of the means of consumption of household members as well as the replacement of the means of work and raw materials. The household labor process, itself, is conditioned by the social relations of production governing the household's access to the means of production."

[13]Deere uses land-size as a proxy measure to distinguish different social strata among the peasantry. Her class categories are defined as follows: landless peasant households (0 -0.25 hectares); smallholder households (0.26 -3.50 hectares); middle peasant households (3.51 -11.0 hectares); rich peasant households (11.01 -30.0 hectares); petty bourgeoisie (30.01 -100 hectares). (Deere, 1978:255-256).

[14]The term reproduction has meaning on several different but inter-related levels: biological reproduction, the daily maintenance of the labor force, and social reproduction, or the reproduction of the whole society. See Mackintosh (1977) for a discussion of the importance of including all three levels of the term reproduction in an analysis of women's subordination.

[15]Young's classification of rural households is defined by land-size and land type. Ricos or the rich peasantry own more coffee land than the majority of the peasantry, approximately 5 hectares or more; the medios or middle peasantry have access to some coffee land, about 5 hectares or less; and the pobres or poor peasants have no coffee land and may have little or no access to subsistence land (Young, 1978:144-45).

[16]See Harmon (1967) and Rummel (1970) for in-depth treatments of factor analysis. The factor methods and procedures for this study are presented in detail in Crummett (1984).

[17]AGE was initially included in the factor test for landed households. Upon inspection of the correlation coefficients, which measure the degree of association between two variables, AGE was excluded from further consideration among landholding units as it did not correlate significantly (at the 5% level) with other variables.

[18]In other words, so few landless households (or none) contained elements of RAIN, IRR, NET, CROP, DEBT, OXEN, FARM, and INSTR that a factor test including these variables would have been entirely inappropriate.

[19]The method most widely employed in the factor design to determine the number of factors to be rotated is the eigenvalue-one criterion. In this approach all factors with an eigenvalue greater than or equal to one are retained.

[20]See Crummett (1984) for a presentation of the unrotated factor matrices for both landed and landless households, along with a complete listing of the correlation coefficients for the variables specified in the two factor analyses.

[21]A factor loading refers to a coefficient in a factor structure. Rummel (1970:108) defines a loading as "a weight for each factor dimension measuring the variance contribution the factor makes to the data vector."

[22]Harmon (1967) presents the following formula for approximating the standard errors of factor coefficients:

$$s_a = 1/2 \sqrt{(3/r-2-5r+4r^2)/n}$$

where r denotes the average value in the correlation matrix and n the sample size. This formula yielded an approximate standard error of 0.151 for landed households and 0.153 for landless units. Loadings greater than twice the estimated standard error are considered statistically significant. For landed households, then, significant factor loadings must be greater than or equal to +/-0.302. The cut-off point for landless households is +/-0.305.

[23]A factor score is the estimate for an individual data case on a factor. Factor scores are calculated from the factor score coefficient matrix given by:

$$F = (A^TA)^{-1}A^T$$

where A is the rotated factor pattern matrix and A^T is the transpose of A.

The scores are weighting each variable proportionally to its involvement in a factor. A weighted summation of all the variables yields a factor score giving cases a high (or low) score if their values are high (or low) on variables contained in a factor (Rummel, 1970:150). The signs indicate whether or not a case tends to possess (positive sign) or lack (negative sign) the characteristics defined by the factor. See Crummett (1984) for a listing of factor scores on landed and landless households.

[24]In comparing these results to the E ratio divisions, we find a strong correspondence between the households contained within the two upper strata of the peasantry and the households scoring 0.84 or greater on factor I. Of the 20 households in our sample categorized as capitalist/rich or upper-middle (See Table 1) 16, or 80% of these households, correspond to the commercial units given by the factor I results. The validity of this cut-off point is further tested in Crummett (1984).

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