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# UNEMPLOYMENT AS A SOCIAL PROBLEM IN URBAN COLUMBIA: SOME PRELIMINARY HYPOTHESES AND INTERPRETATIONS

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16. Abstract

This paper focuses on and tests the hypothesis that the rate of open urban unemployment reflects fairly accurately the difficulties of getting a job, especially for the unprepared poorly educated lower part of the population and that, due to the low labor absorption of modern industry and other urban sectors, this problem is likely to become more aggravated as time goes on. Participation rates may be expected to decrease, the unemployment rate to increase, and income distribution to worsen. Employment problems will be particularly severe for the rural to urban migrants swarming into Colombia's cities at a rapid rate.

While this study concludes that open unemployment is not one of Colombia's more severe problems in terms of its direct negative impact on the welfare of individuals, it is by no means meant to suggest that difficulty of achieving employment is not a great problem; that difficulty appears to be tightly tied with the income distribution problem as a whole, and it therefore appears more important to focus on the overall income distribution problem than on an "unemployment problem."

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## ABSTRACT

The problem of open urban unemployment has come dramatically to the attention of policy makers in the 60's in Colombia, after previously receiving virtually no attention. In the larger cities of Colombia during the 60's, a weighted average unemployment rate tended to fluctuate around 10 or 11 percent, reaching as high as 14 percent, and never falling significantly below 10% (although it was lower in some cities, in particular Bogotá). Particularly high rates in 1966 and 1967 fueled fears that the rate might be on an upward trend leading to disastrous levels. By 1970, however, it was back to the range typical of the early 60's.

Open unemployment is a phenomenon characteristic of the larger cities in Colombia (although it is not typically highest in the largest of all, Bogotá; Cali and Barranquilla and sometimes Medellin tend to register the highest rates). In rural areas and small towns rates are lower.

This paper focuses on and tests the hypothesis that the rate of open urban unemployment reflects fairly accurately the difficulties of getting a job, especially for the unprepared poorly educated lower part of the population and that, due to the low labor absorption of modern industry and other urban sectors, this problem is likely to become more aggravated as time goes on. Participation rates may be expected to decrease, the unemployment rate to increase, and income distribution to worsen. Employment problems will be particularly severe for the rural to urban migrants swarming into Colombia's cities at a rapid rate.

Although the hypothesis undoubtedly has elements of validity, the statistics and interpretations presented here generally tend to contradict it more than to support it. As noted above, there is no evidence of a secular upward trend in the open unemployment rate in urban Colombia.

There is no evidence of a secular decrease in participation rates, after allowance for increasing school enrollment ratios for the young are taken into account; participation rates did tend to decline from 1951 to 1964 but have subsequently increased, due in large part to the rather dramatic increase in female participation. In general, unemployment rates are lower for immigrants than for native-born urban dwellers, and lower for people with no education or rural primary than for people with urban primary or secondary.

It seems probable on the basis of the evidence that a large part, if not the majority, of the unemployment observed in urban Colombia is related to individuals for whom the chance to remain unemployed rather than accepting a job they do not want is a "luxury" which they or their families can afford. In other words, many of the unemployed are not the poor; the group which can afford to wait for better opportunities is, almost by definition, not poor; it appears that about half of the unemployed pool at a given point in time are trying to obtain jobs which would put them in the top quarter of third of the income distribution. Evidence on occupational mobility suggests that the really firm obstacle against mobility is between blue collar manual laborers (excluding people in commerce and salesmen) and white collar workers -- including office, professionals, and so on. Very few people appear to move up over this line; education at a certain level appears to be the key to enter the latter category and the rapid increase in urban edication over the last two decades -- in particular of secondary education -- may therefore plausibly be hypothesized to lie behind much of the increase in unemployment. Where a key objective of getting the education is to move out of the blue collar class, the resistance to accepting a blue collar job when white collar jobs are scarce is

Another part of the unemployment does, undoubtedly, correspond to a more traditional interpretation, i.e. it involves low income people with relatively low skills and poor preparation. And it contributes to the low welfare of these people; but the evidence tends to suggest that the state of being openly unemployed is not so severe a problem for these people as are their low incomes, bad working conditions, and the difficulty of finding jobs; the difficulty of finding jobs may be great, but with the incentive to find them so high, these people do, so the unemployment rate is not a good indicator of their problems.

It has been hypothesized that the increasing share of the urban labor force in commerce and personal services represents a "safety valve" exit from the state of or danger of unemployment; and it has been argued -- usually on the basis of the National Accounts statistics -- that incomes in commerce have been constant or decreasing over time. This study, relying on new evidence from the 1967 Commerce Census, suggests that these prior conclusions were unwarranted and points to evidence that workers in small scale commerce establishments have achieved substantial income gains over the period 1954-1967. The "safety valve" interpretation, in short, has to date no empirical support.

While this study concludes that open unemployment is not one of Colombia's more severe problems in terms of its direct negative impact on the welfare of individuals, it is by no means meant to suggest that difficulty of achieving employment is not a great problem; that difficulty appears to be tightly tied with the income distribution problem as a whole, and it therefore appears more important to focus on the overall income distribution problem than on an "unemployment problem." Frequently the appro-

priate policies would be similar for the two in any case, but some policies which might be designed to resolve the "luxury good" type of urban unemployment discussed above, e.g., creating white collar jobs in the government bureaucracy, fostering industries with high white collar job requirements, and so on -- would undoubtedly worsen Colombia's already bad income distribution, and probably should be avoided if possible. Political pressure to adopt such policies could become stronger given the rapidly increasing pool of people with secondary education and the continuing class prejudice against blue collar work.

# Unemployment as a Social Problem in Urban Colombia: Some Preliminary Hypotheses and Interpretations

## Introduction

The rather rapid increase in open unemployment rates which seems to have occurred in a number of less developed countries between the 1950s and the 1960s has raised the alarm that this problem may become more severe in the 70s and subsequently, as the rapid rural to urban population shift continues or intensifies in these countries. The well documented tendency for many countries to introduce modern capital intensive machinery in their industrial (and other urban) sectors, while at the same time medical improvements increase the rate of population and labor force growth and bad rural conditions encourage migration to the cities, make these fears seem plausible.

Colombia is a case in point. It is clear that effective policymaking in that country will henceforth require a detailed understanding of urban unemployment. The phenomenon did become more severe in the 1960s, as far as can be surmised, and there are many auguries of its remaining substantial for some time to come. Appropriate decisions require an understanding of:

a) The economic structure and the mechanisms which lead to its existence;

b) Its impact on total output and income in the economy, and

c) Its overall social cost, part of which is likely not to be measured in terms of output foregone but in uncertainty, instability of income, etc.

Poverty or Unemployment - Which is More Serious? Are they Part of the Same Package?

Policy makers in many underdeveloped countries are in the process of adding improvement in income distribution and reduction in the level of unemployment to their main goals. Discussion continues as to whether output maximization is or is not in conflict with the other two; it is widely assumed that unemployment is of a piece with the poverty and distribution problems, i.e. that the bulk of the unemployed are from the working class and the marginal urban dwellers. And it is frequently hypothesized that people who are at one point of time openly unemployed are likely to be underemployed or disguisedly unemployed at other times -- that is, that these two categories may not be far from each other on a spectrum of "occupational problems."

Much interest attaches to the question of whether a low open unemployment rate need be treated as a separate policy goal in underdeveloped countries; it would not be necessary to do so if it were so closely entwined with the poverty--income distribution problem that the attainment of both objectives involved the same policy measures. It would again have substantially less interest as a goal if it were found that the people who are unemployed are not at the bottom of the "welfare scale."

Perhaps the most frequent interpretation of the unemployment phenomenon and its implications is that the masses of relatively uneducated and unskilled rural to urban migrants, along with some

native born city dwellers compete for too few jobs, with the unsuccessful competitors being "weeded out" into the unemployment pool. Such a view makes the unemployment problem very much part and parcel of the income distribution problem--the more serious is unemployment then, almost by definition, the more serious also is income distribution.

A second interpretation, jointly of the rapid rural to urban migration and of the unemployment in the cities, links both to a substantial wage differential between the rural and urban areas, and suggests that the unemployment phenomenon will continue to be severe as long as that differential remains--that as long as wages in a protected subsector of the urban economy remain high and above equilibrium, the migratory flow will not cease since it involves either an individual risk taking point of view, or a family income maximizing and averaging phenomenon.[1] This interpretation, along with the previous one, is pessimistic in that it suggests the unemployment phenomenon will become more severe, and that unemployment is serious and a separate welfare problem over and above the other difficulties such as generalized poverty which a less developed country may have.

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[1] i.e. either from the individual or family point of view it is better to take a chance on getting a good paying urban job, even though unemployment is also a definite possibility, than to accept the much lower rural wage, even though it can be earned with certainty. See Michael Todaro: "A Model of Labor Migration and Urban Unemployment in less Developed Countries" American Economic Review, (March, 1969).

A number of characteristics of open unemployment as observed in Colombia suggest that the above interpretations are somewhat wide of the mark in their explanations, both of the basic mechanism which generates unemployment, and of its severity relative to other social problems the country may face.[1] Most obviously out of tune is the fact that many of the unemployed are relatively well educated and are searching for jobs which would put them quite high in the country's income distribution; the unemployment rate for immigrants to cities tends to be lower (at least for larger cities where the comparison is possible) than for urban natives, standarized for age and educational levels. These factors, and others to be brought out in more detail below, suggest that a good share of the unemployment reflects a discrepancy between aspirations and actual possibilities in terms of occupational status, income, etc. of persons who are in a position to refuse unattractive possibilities while waiting for the desired one. The phenomenon may thus be more a reflection of relative well being than of poverty. Both empirical evidence and logic (which suggests that an individual or family without any wealth cannot continue to subsist while unemployed) support this view at least in some measure. It is also consistent with the fact that, among less developed countries, some of those with the lowest urban unemployment rates have relatively low income levels and presumably low wealth levels.

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[1] It should be noted that Todaro's explanation of the phenomenon (op. cit) was developed in the context of African countries, which may be substantially different in certain relevant structural aspects from the Latin countries, or at least from Colombia.

This paper, then, discusses the nature of unemployment in Colombia, trying to distinguish broadly among the competing hypotheses just cited, and focusing also to some extent on the nature of the unemployment (part time work, hard core unemployment, etc.). Of Major interest are (a) a comparison between unemployment and general poverty as sources of low welfare, and (b) some aspects of appropriate policy response.[1] Comparison of the unemployed with low income employed people in terms of such characteristics as (pre-unemployment) income, occupation sought, current living standards, etc., is a relevant exercise both to give perspective as to how seriously the unemployment problem as such should be taken, and to better understand its nature and causes.

It should be emphasized that the discussion is for the most part limited to open unemployment and does not analyse the possibly much more important disguised unemployment. The latter form may well have serious lost-output implications and is certainly frequently associated with low income levels and a serious "welfare" problem. Our hypothesis, therefore, is not that unemployment as a whole but rather "open unemployment," on which much of the discussion has focussed, is a relatively unimportant social problem. A corollary is that more attention and research should be directed to those other, probably more serious, forms of unemployment.

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[1] We do not discuss here in any detail the basic question of the extent to which unemployment is due to such phenomena as high capital intensity in modern industry, rapid population growth, etc., and as a result do not try to appraise policy with respect to these variables.

The Null Hypothesis : Unemployment as a Luxury Good

To give some structure to the discussion to follow, it is convenient to set out in some detail the null hypothesis to be tested.

1. A major component of the unemployment pool consists of people who would with reasonable effort be able to get some job, but who are unemployed because of a preference not to accept available jobs and rather to wait for or continue to search for preferred ones. They are unwilling to accept the income and/or the prestige associated with the available occupations. Sometimes they might find such jobs disagreeable per se.[1]

2. A high proportion of the unemployed will be young and relatively well educated. The educational level attained tends to define the sort of occupation a person will look for, and unwillingness to accept relatively menial tasks is only plausible for persons with a certain level of education. Youth, which connotes relative lack of responsibilities, ability to rely on family for a living and perhaps optimism, implies a greater tendency to accept unemployment rather than an un-

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[1] The typical dividing line between voluntary and involuntary unemployment, related to whether the person is actively seeking a job, clearly leaves a wide range of possible levels of vigor with which the job is sought. A person's activities could be more fully described as involving both a certain total level of job seeking effort or activity, and a distribution of that activity among certain possible types of jobs. The situation hypothesized here is one in which little or no effort is expended in looking for certain types of jobs while some or perhaps a great deal of effort, depending on the situation, is directed at obtaining other types. Obviously the likelihood that a person will remain unemployed depends both on his general level of job seeking effort and on the relationship between the direction of that effort and the types of jobs which can most easily be found. Qualified seekers may have found certain types of white collar jobs to be scarcer recently than they might have been, say, in the early fifties.

satisfactory job. Thus young people will predominate in the pool of the unemployed and the unemployment rate will be highest for them.[1] Since the possibility of depending on family is greater for single people, one might (as a corollary) hypothesize that the unemployment rate, other things being equal, would be higher for single than for married people.[2]

3. For a given age and educational level the unemployment rate will be higher for people born in cities than for people who have emigrated to them. This and the previous predictions essentially relate to the fact that few, regardless of their basic preferences, can afford to remain permanently unemployed. The length of time one can remain unemployed depends on his own wealth level plus that of friends or family on which he can draw (e.g. by living with them). Several factors suggest that migrants will have lower unemployment rates: first, uncertainty of job acquisition and inadequate wealth level to sustain unemployment over a lengthy period of time are likely to act as a deterrent to many people's migration unless and until they have obtained a job. Typically migrants may have lower wealth levels on which to draw than city born people, whose parents may have built up a certain reserve; young urban job seekers can subsist more easily on average than rural ones since they can live with their parents;

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[1] Another reason to expect a higher employment rate for this group is simply that many are first entrants and even if overall employment difficulties are small, the frictional (looking around among alternatives) type of unemployment should be highest for them. Due to this section, it is of interest to compare the "previous workers" unemployed rate by age (as well as the total rate).

[2] There is, of course, an identification problem in the testing of this relationship since there may be a causal relationship running from "having a job" to "getting married."

some but not all immigrants can live with relatives; both these differences suggest that the latter group will remain in the unemployed state a shorter period of time before reverting to less desirable jobs.[1] Finally the migrant may have a specific place to which to return, whereas the native born person presumably must remain in the city. All these arguments should hold for people who do not differ in terms of educational level, jobs sought, etc. Many migrants are likely to be willing to accept menial jobs in the first place, so on this count too their unemployment rate should be lower if in fact it is less difficult to get such jobs than ones farther up on the occupational scale.

The chance to draw on family or friends in the city is presumably less for early migrants from a given village, than for later ones, so one might anticipate a narrowing over time of differences between the job hunting and accepting behavior of migrants and natives.

4. The participation rates for those groups with educational and other characteristics particularly associated with unemployment will be relatively low, since the possibility of waiting for the desired job while unemployed and of not searching at all (i.e. not being formally unemployed) will tend to depend on the same background factors. If unemployment had strong poverty implications, it would be expected that a high rate for a given group would necessarily imply a high participation rates for that group.

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[1] It might be added that female immigrants are more easily lured into prostitution (an activity which of course keeps them out of the unemployed pool) than city born girls.

5. Although over periods of time people may be voluntarily unemployed, it is true, especially for men, that most must eventually enter the labor force. From the point of view of the urban economy, it may be of interest to distinguish three mechanisms or "exits" from the unemployment state which could be operative under the general circumstances hypothesized. There could be a "waiting line" phenomenon whereby the people who could afford to remain unemployed for a long period of time (living with their friends, or whatever) would do so; to the extent that people simply wait it out, a useful indicator of the overall severity of unemployment would be the length of the waiting line, presumably indicating how long the average person was unemployed before finding the job for which he was searching. A second possible mechanism is outmigration from the city in question; with respect to the urban unemployment problem as a whole, the relevant migration might be to the rural areas, although it is possible that there is a step phenomenon here (as in the case of rural to urban migration) and that people unsuccessful in finding the job they want in a large city move to a smaller one. Finally, there is the possibility that people simply give up, at least for the time being, their aspirations for the job they hoped for and take a less attractive one or leave the labor force. Various combinations of these phenomena may also occur; for example, a person may eventually have to take an unattractive job but continue to search for the job he wanted; he may migrate out of the city and continue to search from a distance for the one he wanted, etc. Present information is

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too limited to identify such combinations. Our basic hypothesis here is that the relative importance of these mechanisms varies widely across income and wealth levels: low income people tend not to remain long in the waiting line, but to accept whatever job becomes available. Better off people remained unemployed longer, emigrate from the city, or simply leave the labor force.

6. To sum up one part of the hypothesis, the representative[1] unemployed person is not badly off compared to many people in the labor force; his unemployment is a reflection of the fact that someone is able to maintain him; further, frequently unemployment is the reaction of people with high job aspirations to a situation where jobs are available, but not the ones they want. People who never had such high aspirations, or who have had them scaled down, are in the labor force and are worse off--as least from an economic point of view--than would be the unemployed if they could obtain the job they want. While this latter comparison does not prove that the unemployed--while they are unemployed--are better off than the low income work force, it hints strongly that a long run comparison between the two groups would indicate that the currently unemployed are not low (relatively speaking) in terms of the present value of their life-time income stream.

7. The social cost of open unemployment in terms of insecurity may not be particularly severe, since when a person achieves stable employment after going through an aspiration adjustment process, his job security may be relatively high. This is consistent with (though not proven by) the low unemployment rates

[1] Or perhaps better, the "median" (on some welfare scale) since the concept of a representative unemployed person may be misleading.

characterizing people in the middle age groups and the fact that a good deal of unemployment results from voluntary job leaving rather than firing.

It is useful in the discussion to bear in mind the opposite set of hypotheses, i.e. that the unemployed are marginal, ill prepared people, disproportionately immigrants, and whose security and welfare level are seriously affected by the difficulties of getting and retaining a job. Since it is unlikely that unemployment is satisfactorily explained by either of these extreme sets of assumptions, effort must be directed to ascertaining what part of the phenomenon is of each type (assuming at least some unemployment falls into each category) or what intermediate combination of assumptions best explains the reality.

We now turn to a consideration of some of the statistical information which (a) bears on the relative validity of the hypotheses advanced above and the competing ones, and (b) helps to quantify some of the phenomena referred to. It is of interest first to review the historical pattern in unemployment rates.

A Review of Information on Unemployment

This section summarizes the available information on unemployment and participation rates; it serves as a background to the discussion of alternative possible causes below; more detailed information is presented in the context of those discussions where appropriate.

The rate of open urban unemployment has been higher in the 60s than it was in the early 50s, though it is not clear whether this reflects any upward secular trend or not. Within the 60s no trend appears; the rate

has tended to fluctuate around a level of 10% in urban areas as a whole. Since the systematic collection of figures began only in 1962, and the evidence from the 1951 census is difficult to interpret, no firm conclusions as to trend can be drawn. Figures on participation rates go back further (with the population censuses) and suggest a decrease extending perhaps until sometime in the early 1960's, followed then by an increase to the present.

A crudely guessed at index of urban unemployment for the four largest cities (Bogota, Medellin, Cali, and Barranquilla) since 1963 shows no trend, but rather an increase followed by a decrease[1] --see Table 1. More doubtful evidence on trends in unemployment comes from the 1951 and 1964 population censuses and the 1970 household survey carried out by DANE; for all municipal seats taken together, the censal and other information suggest an average unemployment rate in 1951 of 3 to 7% and in 1964 of 8-10%.[2] In

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[1]Though it is true that there may be an increasing downward bias over the last few years--see sources and methodology of Table 1. Taking other information into account (i.e. DANE's 1970 Encuesta de Hogares) it seems unlikely that this bias has been great.

[2]The 1964 census showed a very low percent of people searching for jobs for the first time so the recorded 6.8% is a downward biased indicator of total unemployment, assuming the CEDE and DANE sample survey evidence on the relative importance of this form of unemployment is fairly accurate.

It is worth noting that the share of unemployment accounted for by first time job seekers is much higher in Colombia (almost 40% in urban Colombia according to the 1970 DANE household sample) than in a more developed country with lower population growth (the share in the U.S. in 1967 was 13.1% - See U.S. Department of Labor, Manpower Report of the President, April, 1971, p. 235). It may be assumed that a young labor force also implies a greater extent of job leaving due to dissatisfaction with the present position. Thus "with an increase of age and work experience, the incidence of job leaving and labor force entrance declines. Job shifting decreases as the worker finds a field suited to his skills and interests and as he takes on the responsibility of supporting a family". (See Kathryn D. Hoyle, "Job Losers, Leavers and Entrants --A Report on the Unemployed," Monthly Labor Review, April, 1969). Data for the period 1964-68 in the U.S. suggest that job-leaver and new entrant unemployment rates are relatively stable, while the job-loser category is the one whose fluctuations correspond to fluctuations in the total unemployment rate (Hoyle, op. cit., p. 28). It can only be speculated whether this is in part true in Colombia; the opposite is frequently hypothesized (e.g. Slighton, op. cit.).

## Table 1

### Urban Unemployment Measures Over Time

| Year | Weighted Average of Open Unemployment Rates of the Four Largest Cities 'CEDE-based estimates) (1) | Urban (Cabeceras) Rates Of Unemployment (DANE Census and sample-base estimates) (2) |
|---|---|---|
| [illegible] | | 3-7 |
| 1963 | 10-12 | |
| 1964 | 10-12 | 8-10 |
| 1965 | 9.5-11.5 | |
| 1966 | 10.5-12.5 | |
| 1967 | 13-15 | |
| 1968 | 12-14 | |
| 1969 | 9.5-12.5 | |
| 1970 | | 10.0 |



Sources and Methodology for Table 1

Column (1) is designed to be a weighted (by economically active population) average of the unemployment rate in the four largest cities, (Bogota, Madellin, Cali and Barranquillia. For some years data was non-existent or infrequently existent for some of the cities, especially Cali and Barranquilla. Crude guesses were taken at their rates for those years, based on the usual relationship between their rates and those of the other cities when data was available for all. The range presented takes into account the possibility of substantial error in the guesses at the rates for cities without data in a given year, since data was most frequently available for Bogota, (which had almost 43% of the economically active population of the four cities in 1964) and next most frequently for Medellin, (with about 22%) the low weights of Cali and Barranquilla meant that the absence of figures from them did not imply particularly large possible error in the estimate of the weighted average rate. Unemployment rates for the various cities over time are presented in International Labor Office, Towards Full Employment: A Program for Colombia, Geneva 1970, p. 366.

Slighton (Robert L. Slighton, Urban Unemployment in Colombia: Measurements, Characteristics, and Policy Problems, The Rand Corporation, Memorandum RM-5393-AID, Santa Monica, January 1968, p. 18) observed that there was a serious possibility that the CEDE sample for Bogota was becoming outdated since 1964, leading to an increasing downward bias in the estimate. He concluded, however, that as of about 1967 the problem could not lead to a bias of more than 0.1-0.2 points in the unemployment rate estimate; even if it accounted for an implausible 3 point downward bias in 1969 the figures for Bogota would not indicate any upward trend over the last few years. Our range estimate for 1969 is wider in part because of the possibility of this increasingly serious bias. If something similar were present in the other cities as well, then one might indeed conclude that unemployment has been worsening. The odds would seem to be against this, however. DANE's 1970 sample survey figures bear this out.

Sources and Methodology for Table 1 (cont.)

With respect to Col. 2, no separate estimate of unemployment rates for 1951 appears to be available as between municipal seats and other localities. The global average was 1.170%. In the 1951 census people searching jobs for the first time were not even in principle treated as unemployed; in 1964 they were included according to the definitions but apparently not in fact, as noted above. The latter census shows first time seekers unemployment as less than one percent of the labor force in all regions, and usually less than 0.5 percent. The most likely interpretation of this underreporting is lack of specialization on the part of the census takers; the specialists taking the unemployment surveys are more likely to be accurate in such an instance. Experience with the university unemployment surveys of the 1960's suggests that on average about 1/3 of the people registered as unemployed are looking for jobs for the first time; this ratio fluctuates somewhat over time and differs substantially from city to city; it is not obvious whether these differences are a systematic function of, for example, size of city or other economic variables. (For data on the breakdown between these two forms of unemployment see Raphael Isaza and Francisco Ortega, Encuestas Urbanas de Empleo y Desempleo: Analisis y Resultados, CEDE, Universidad de Los Andes, Bogota, January 1969). If the same ratio of urban/rural unemployment rates is assumed for 1951 as for 1964, and it is assumed that one-third of all unemployment was unregistered since it involved people searching for their first jobs, then the 1951 figure for urban (municipal seats) would have been 2.7. Since unemployment data was available on a departmental basis, and since the ratios for some of the rural departments tended to be very low (lower for a whole department than the rural average implicit in the methodology just cited) a calculation assuming rural unemployment of 0.5 percent was made yielding an average of the urban zone of 3.5 percent. It seems highly probable that even this figure is downward biased due to infamiliarity of the census takers with the issue; perhaps a plausible guess at a range would be 4-7%; even such a range cannot be assumed with much confidence.

The 1970 DANE household survey is the source of the 1970 urban unemployment estimate. (See DANE, Boletin Mensual de Estadistica #238, Mayo 1971, p. 62.)

The "labor force" and "unemployed" definitions were not the same in the 1964 census and the 1970 sample, so it is necessary to consider how different the unemployment rate calculations could be for a given real situation. The respective labor force definitions were as follows:

(a) 1964 census. People of 12 years or more, who during the censal year exercised a paid occupation in the production of goods or services and those unpaid family helpers who worked at least one third of the normal working period.

Sources and Methodology for Table 1 (cont.)

Minimum time was not specified in the definition, but (see Resumen General, p. 140) it included people working less than one month. Presumably none of these were family helpers since such people are not included in the active population unless they work at least one third of the regular work period. Since paid workers were (according to p. 18) defined as "employed" if they worked nine or more months, (even if not working on the censal date) probably the cut-off for family helpers was 3 months. Thus there must have been about 300,000 paid persons who worked less than (up to) 3 months. So the definition of the labor force would on those grounds seem to have been quite broad. On the other hand, some observers have suggested that the question "months of work in the last year" was widely misinterpreted to mean months worked in what had passed of the calender year 1964, resulting in some of the declarations of low number of months worked. The higher number reporting 5-6 months worked could support this, though it would also be consistent with people's reporting in terms of round fractions; disproportionate numbers also reported 3-4 months and 7-8 months).

(b) 1970 Household Survey

People of 12 years or more who during the reference week exercised a paid occupation in the production of goods and services and those unpaid family workers who worked at least one third of the normal period (i.e. at least 15 hours). Members of the armed forces and part-time workers are included (DANE, Encuesta de Hogares 1970, p. VIII), as long as they worked at least one hour in the reference period.

If we assume that in either case inclusion in the labor force simply required "any work in the reference period" we could conclude that the working or looking for work in a given week would have been in one of those categories over a year-long period. The difference would, technically, amount to (a) people who retired during the last year and (b) people who for other reasons left the labor force during the year. Probably these groups would be relatively small. If one assumed a standard 60 year retirement age, the percent of the labor force passing this point in a year would be about 0.6% in one year. Other people leaving the labor force in a given year (perhaps primarily women) might amount to a comparable amount or more. If one tenth of the women in the labor force during the previous year left it by the end of the year, this would constitute a little over 2 percent of the labor force. Perhaps, therefore, an upper estimate of the total difference between the two labor forces would be 2-3%.

Sources and Methodology for Table 1. (cont.)

The definitions of unemployment were as follows: In the 1964 census, it appears (although there is considerable confusion here) that a necessary condition to be unemployed was not to have worked on the censal date; the other necessary condition was to have worked less than 9 (3) months if a paid worker (family helper). In the 1970 household survey, the unemployed person was one who had not worked during the week although actively seeking employment. The survey category may be expected to be about as wide as the census one; almost all the "census unemployed" would be unemployed according to the sample definition (except a strange category listed as having worked before but not seeking work in the reference year--about 0.3% in 1964) while the sample unemployed would not all be so classified in the census. The percent of people not working on the censal data, having worked 9 months (3 months if family helpers) and not working during the sample week would be very small, if the 1964 figures can be trusted--only 0.2% of the labor force satisfied the 9 (3) month condition yet were unemployed on the censal date. Probably few of these would have worked in the censal week so the difference introduced in this way would be about 0.2% of the labor force as noted above, the sample labor force would be 2-3% lower. On balance the sample unemployment rate could be a fraction above the census one though it seems that the difference could not be significant.

Usefulness of these census figures depends largely on whether they are consistent with the university sample survey (since a satisfactory methodology cannot be taken for granted in the former case). For Bogota the figures seem at first glance to be remarkably consistent: the census, taken in July, indicated 8 percent open unemployment (ILO, op. cit., p. 301); the ratio using the usual university sample definition of unemployment however, would have been 7.5, exactly equal to Slighton's upward revision of the CEDE information for June 1964. In the absence of further information, one would thus easily reject the null hypothesis that the implicit definition of unemployment in the two sources was different, or that the CEDE survey was a non-representative one. The issue is confused, however, by the fact that the breakdown of unemployment between the "aspirantes" and "cesantes" categories is different; in the CEDE data aspirantes constitute 2.5 of the reported 7.2 percentage points of unemployment; in the census information this category only provided 0.35 points of the 7.5% total. The two pieces of information taken together could suggest that both sources were downward biased, but for different reasons, and that total unemployment might have been say 8-10%, probably closer to the upper limit.

The Medellin data perhaps provide a better test; in June 1964 the university sample indicated an unemployment rate of 12.6, the population census data have not been published for Medellin alone, but the figure for Antioquia cabeceras is 9.0%. Since smaller cabeceras apparently have lower unemployment rates (as defined in the census), it appears that Medellin should be about 11.5 to be consistent with its share in economically active population of the Antioquia cabeceras. A discrepancy of two percent (a little more assuming the correction of the census definition to make it parallel to the university sample definition would lower the 11.5 figure ) is in the range which would be predicted given that the census for some reason did not pick up first time job seekers.

1970 the comparable figure was about 10%. This suggests a marked increase between the 50's and the 60's, but since the year 1951 was in the midst of Colombia's most rapid growth phase, it might be argued that part of the difference with 1964 (perhaps a substantial amount) was due to cyclical rather than secular factors.[1] Further, the open unemployment recorded by the censuses is higher in municipal seats than in rural zones, and in general somewhat higher in larger cities than in small. It seems plausible that as the economy develops -- cities become larger, mobility of people greater, preparation more specialized and so on -- the expected "frictional level" of unemployment for the economy as a whole should rise somewhat; it would not be implausible to assume that it rose by one or two percent in the 1951-1964 intercensal period. And though it seems unlikely, it is not impossible that the increase over the period was by as little as 1-3%. If another part of the increase were due to the different cyclical position of the economy at the two points of time, it would become quite unclear whether anything would be left to be explained by a "structural increase."[3]

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Sources and Methodology for Table 1 (cont.)

In Caldas, where the unemployment rate in Manizales was extremely high in 1967 (though that of Pereira was only 11 percent in 1966) the rate of urban areas according to the 1964 census figures was a little under 7 percent.

[1] I.e. the combination would not necessarily indicate a tendency to higher unemployment for a given growth rate of income or output. Support for this argument is implicit in the fact that the 1938 population census reported a higher unemployment rate (2.5%) overall than did 1951. Both were presumably biased down substantially -- see earlier discussion. Atlantico showed an 8.1 rate; Antioquia, 3.9 and Cundinamarca, 2.4, all above the 1951 figures. The rural-urban division was not available.

[2] Discussion of the 1951 figure is presented in Table 1. Thus, according to the 1964 census, the cabeceras as a whole had a registered unemployment rate of 6.8% and the rural zones (otras localidades) of 2.0%. Bogota's registered rate (for the cabeceras of the Distrito) was about 4% and that for the other major large cities was probably higher.

[3] Note also that a small part of the increase is a natural result of an age structure with more and more young people. If the true urban unemployment rate in 1964 had been, say, 10%, application of that year's observed age and sex specific unemployment rates would have implied an unemployment rate of a little less in 1951, perhaps 9 percent.

The 1964 census--1970 household sample data, like the CEDE information suggest little net change over this period, after the apparently different treatment of the first time job seekers in the two sources is allowed for (see Table 2). "Cesantes"[1] were reported as about 6.5% of the labor force in 1964 and 6.05% in 1970. First time job seekers were 3.91% in 1970; the reported figure in 1964 was an implausible 0.24%.

It should be noted that, even if it were concluded that to date there had been no important upward trend, there would remain a serious possibility that, with the lagged effect of the increase in population growth and with a continued failure to resolve the problem of low labor absorption in some of the modern urban sectors, unemployment would become more severe and eventually have to be reckoned with even more carefully in social accounting. This result would depend on unemployment's being more the phenomenon described by the "alternative hypothesis" cited above rather than that of the null hypothesis of this paper. Fortunately some fairly detailed information is now available on the anatomy of unemployment in Colombia.

While the overall unemployment rate may be concluded not to have undergone a significant net change over the period (though CEDE's figures suggest it rose and then fell again during this 6 year interval [see the 1967 data for eight cities--Table 2), there were changes in structure. The male unemployment rate probably fell somewhat (the "cesante" rate dropped from around 7.5 to 6.0, according to the figures) while the female rate apparently rose (the "cesante" rate increased from about 4.5 to 6.0%). The first time seekers rate was very high for women in

[1] People who had worked before becoming unemployed.

1970 (5.6%); how much of the change from the insignificant level (0.2%) reported in 1964 was real cannot be easily guessed at.[1] An increase in female unemployment rates might well be expected given the considerable increase in female participation rates (see Table 16). CEIR data indicate that usually about 50% of the female unemployed are aspirantes, as compared with a range of 20-35% for men, according to the year, city, etc. This difference may be interpreted in terms of a looser tie on the part of women to the labor force on becoming laid-off, moving, etc.; assuming many women who leave the labor force at one point of time desire subsequently to reenter it one would expect to find many aspirants.[2]

Disaggregation by region suggests that the 'little change on average' pattern holds at this level also. (See Table 3). For all five of the regions into which the country was divided for purposes of

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[1] It seems almost certain that this category was in fact underreported in 1964. Even in 1964, by which time it appears that the census estimation of unemployment had improved, its handling still appears to have left much to be desired, judging from the internal inconsistencies reported to have been found in many of the questionnaires.

[2] A second factor in recent years may be the rapid overall incorporation of women into the urban labor force, which (see below) has led to a rather dramatic increase in female participation rates for certain age groups.

Table 2

Urban[1] Unemployment Rates by Type of Unemployment:
1964, 1967 and 1970

| | 1964 - Municipal Seats[2] | | | 1967 - Eight Cities | | | 1970 - Urban | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | Men | Women | Total | Men | Women | Total | Men | Women |
| Previous Workers (urban plus rural) | 6.41[3]<br>6.85[3]<br>(5.99-4.51) | 7.23[3]<br>7.68[3]<br>(4.19-4.75) | 4.41[3]<br>4.67[3]<br>(3.19-3.56) | 9.51 | 9.32 | 9.06 | 6.05<br>(4.57) | 6.01<br>(4.16) | 6.01<br>(5.73) |
| First time job seekers (urban plus rural) | n.a.<br>(0.24) | n.a.<br>(0.24) | n.a.<br>(0.26) | 5.13 | 3.11 | 8.66 | 3.91<br>(2.93) | 2.75<br>(1.88) | 5.83<br>(5.83) |
| Total (urban plus rural) | 6.79-7.26<br>(4.23-4.75) | 7.69-8.17<br>(4.45-4.99) | 4.67-4.95<br>(3.45-3.87) | 14.65 | 12.43 | 18.52 | 9.96<br>(7.50) | 8.78<br>(6.04) | 12.14<br>(11.56) |

[1]Bracketed figures refer to the country as a whole, in those cases where urban figures could not be separated out and where the comparison seems of interest.

[2]A range is estimated since one category in the census--"workers without employment on the censal date but who worked the minimum required during the censal year"--is impossible to interpret. These people were either unemployed on the censal date or were not part of the labor force--i.e. were not looking for work.

"Since this ambiguous category could not be disaggregated between "municipal seats" and "other localities", the lower limit estimate here excludes it and the upper limit estimate assumes two thirds of the people in this category were urban and unemployed (somewhat over two thirds of the other unemployment categories were composed of urban persons).

[3]To estimate these figures (the census did not distinguish previous workers and first job seekers at the urban level-only for the country as a whole) it was assumed that the share of first time job seekers in total unemployment was a little higher in the municipal seats than in other localities. The result is not sensitive to this assumption since the number of first time job seekers reported is so small.

Sources and Methodology

The 1964 data are from DANE, Censo Nacional de Población: Resumen General, 1964, pp. 110-112.

The 1967 information is from ILO, op. cit.

The 1970 information was deduced from age specific rates of unemployment by type presented in DANE, Boletín Mensual de Estadística, #238, p. 32.

the 1970 sample has also suggested that the male unemployment rate fell; the fall probably was within the 1.2-2.5 point range in all the regions.[1] Judging from CEDE's data for Bogota, there seems to have been a real increase in the first time seekers rate between the two years; the average of the 1964 observations was 2.3% and the average of the first two observations of 1970 was 4.8%; that for June was 4.1%.

Meanwhile stated female cesante rates appear to have risen from perhaps 4.5-5.0% to a little over 6%.

Thus a considerable overall increase seems clearly to have occurred. A comparison of the 1970 and 1967 figures corroborates the conclusion that unemployment rates tend now to be higher for women than for men.

Table 3 indicates that high male urban unemployment areas are the north coast, Bogota, and the Antioquia-Caldas-Tolima-Huila Zone; the southern region (Valle-Choco and South) and the north-east (the Santanderes, Boyaca, and Cundiramarca excluding Bogota are low male unemployment zones. Though these regions are too large and in some cases too heterogeneous to permit of easy generalizations, there appears to be some tendency for the larger city--higher income

[1] Assuming the cesante figure in 1964 is more or less 0.2 to 0.4 points below the total figure presented here. For reasons discussed in the context of Table 2 it seems likely that the 1964 census figures may be downward bias indicators even of the cesante rate; if that be the case the fall between 1964 and 1970 may be greater than suggested in the text.

## Table 3

### Unemployment Rates by Departments and Regions: 1964 and 1970

| Region and Department | 1964 Census | | | | | | 1970 Encuesta de Hogares Cesante Unemployment Rate | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Urban | | | Rural | | | Urban | | | Rural | | |
| | Total | Men | Women | Total | Men | Women | Total | Men | Women | Total | Men | Women |
| I Atlantico | 10.476 | 11.884 | 6.492 | 7.927 | 8.113 | 4.462 | | | | | | |
| Magdalena | 4.031 | 4.367 | 2.974 | 2.613 | 2.620 | 2.514 | | | | | | |
| Bolivar | 7.319 | 8.182 | 4.951 | 5.318 | 5.902 | 4.913 | | | | | | |
| Cordoba | 13.643 | 3.834 | 3.142 | 1.587 | 1.498 | 2.576 | | | | | | |
| Total Atlantico Region | 7.538 | 8.433 | 5.003 | 3.641 | 3.655 | 3.472 | 6.46 | 6.16 | 7.09 | 3.90 | 3.58 | 8.53 |
| II Santander | 4.629 | 5.682 | 2.849 | 2.579 | 2.610 | 2.321 | | | | | | |
| Norte de Santander | 5.280 | 5.712 | 4.210 | 1.007 | 0.694 | 4.340 | | | | | | |
| Boyaca | 2.991 | 3.688 | 1.582 | 2.100 | 2.207 | 1.299 | | | | | | |
| Cundinamarca | 2.875 | 3.504 | 1.481 | 1.439 | 1.478 | 1.113 | | | | | | |
| Meta | 2.807 | 3.146 | 1.408 | 0.929 | 1.014 | 0.823 | | | | | | |
| Total Eastern Region | 3.900 | 4.581 | 2.426 | 1.830 | 1.843 | 1.723 | 2.78 | 3.02 | 2.41 | 1.12 | 0.95 | 1.37 |
| III Bogota | 8.019 | 9.580 | 5.179 | 6.514 | 7.527 | 4.053 | 7.96 | 7.46 | 9.66 | n.a.[1] | n.a.[1] | n.a.[1] |
| IV Huila | 8.440 | 9.292 | 6.334 | 5.429 | 5.348 | 6.300 | | | | | | |
| Caldas | 9.493 | 10.789 | 5.335 | 3.083 | 3.070 | 3.361 | | | | | | |
| Antioquia | 8.998 | 9.630 | 7.304 | 4.924 | 4.819 | 6.284 | | | | | | |
| Tolima | 3.935 | 4.769 | 1.598 | 2.106 | 2.178 | 1.371 | | | | | | |
| Total Central Region | 7.575 | 8.240 | 5.714 | 3.902 | 3.859 | 4.498 | 5.74 | 6.32 | 4.30 | 1.96 | 1.85 | 3.33 |
| V Valle | 6.913 | 5.581 | 4.886 | 2.758 | 2.769 | 2.610 | | | | | | |
| Cauca | 1.806 | 2.011 | 1.305 | 0.702 | 0.682 | 0.808 | | | | | | |
| Narino | 6.342 | 7.482 | 4.122 | 5.159 | 5.611 | 3.535 | | | | | | |
| Choco | 3.783 | 4.874 | 0.917 | 0.822 | 1.076 | 0.278 | | | | | | |
| Total Southern Region | 6.213 | 7.627 | 4.886 | 2.796 | 2.926 | 2.134 | 5.68 | 5.52 | 5.97 | 3.37 | 3.05 | 4.81 |
| Total | 6.790 | 7.691 | 4.628 | 2.91 | 2.94 | 2.608 | 6.05 | 5.98[2] | 6.13[2] | 2.42 | 2.07 | 4.72 |

Table 3 continued:

[1]The DANE tabulados presenting the detailed unemployment figures show only three unemployed persons in the rural Bogota region (where the sample was very small) so the rate figures cannot be taken seriously.

[2]These figures differ slightly from those of Table 2, due to a difference in the method used to calculate them from the underlying regional figures.

Sources: For 1964, the population census. For 1970, the Encuesta de Hogares (p. 6).

zones to have higher unemployment rates.[1] The relatively poor northeast has strikingly lower rates (both male and female) than any other region. Bogota, the richest center, appears to have an overall unemployment well above the national average.[2]

Open unemployment has usually fallen in the range 7 to 18% in the cities of varying sizes--where surveys have been made. A summary of the information available to date is presented in Table A-1. The figures collected fairly continuously for Bogota since 1963 and sporadically for other cities worsen markedly in 1966 and 1967, while improving again in 1968 and especially in 1969. There appears to be a fairly consistent relationship among the rates of the four largest cities, that of Bogota being systematically lower than the others; exceptions to this rule have probably been infrequent. Figures for Barranquilla are the scarcest, but they suggest it may be the worst of the four; this is consistent with other impressionistic evidence.

It might be anticipated that the higher rates for some of the larger cities reflect in part young populations heavily concentrated in the age ranges where unemployment tends to be highest, and that age specific unemployment rates would be less a function of city size than are the overall rates. In particular the share of unemployment corresponding to people looking for their first job relative to those who have previously had jobs

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[1] Valle and Narino are somewhat out of line with this generalization in 1964, but the 1964 data are in any case less persuasive (because of inferior quality) than the 1970 data.

[2] The DANE household survey, taken in June-July 1970 indicates a rate of only 7.9% (Revista del Banco de la Republica, Mayo de 1971, p. 790). Given that the definitions of unemployment appear to be identical (CEDE, Encuesta de Empleo y Desempleo, p. 91) this is a huge difference. It raises the possibility that CEDE's sample framework may become somewhat obsolete. An age specific check would be required to test for other possible explanations.

is highest where the population is young; this suggests that the "cesante" rate may vary less by city size than the overall rate.[1]

Rates of open unemployment appear to be higher in the largest cities taken as a group than for the intermediate sized and smaller cities[2] (although Bogota's rate appears usually to be below that of the other three largest cities).

Table 4 shows the unemployment rates for the eight cities of CEDE's 1967 study; the cesante rate is a little higher in the larger cities (higher for men and a trifle lower for women) but the aspirante rate is 50% higher or more for both sexes in the four largest cities. The higher total rate (a difference of over 3 percent for both sexes), reflects mainly this latter; it might well be that higher aspirante unemployment rates reflect better job opportunities.

The smaller cities show a considerable range of unemployment rates; figures have been taken for Girardot as far apart as 1963 and 1969, and have never gone about 10%, although no survey was taken during years of the worst unemployment in Bogota. At the other extreme, the 1967 figure for Manizales was 17.4%, exceeded only by Cali's figure of about the same time. One may hypothesize that the cities above a certain size have some homogenity in terms of composition of occupation or structure of labor marketing while the smaller ones may differ more markedly, suggesting a greater range of unemployment rates at a given time. The lower average

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[1] Unemployment depends, of course, on the occupational category and the sector, so cross city differentials may be expected to reflect these variables as well.

[2] This comes through particularly in the population census figures where the unemployment rate for all the cabeceras of a department (ranging down to a 1,000 or so population) is almost invariably below that for the capital city.

Table 4

Unemployment Rates and City Size

| | Males | | | | | | Females | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| City | Overall Unemployment Rate | Cesante Rate | Aspirante Rate | Weighted[1] Average Cesante Rate | Weighted[2] Average Aspirante Rate | Weighted Average Unemployment Rate | Overall Unemployment rate | Cesante Rate | Aspirante Rate | Weighted[1] Cesante Rate | Weighted[1] Aspirante Rate |
| Bogota | 14.3 | 10.55 | 4.4 | 10.01 | 3.59 | 13.60 | 17.9 | 8.47 | 9.4 | 9.83 | 10.15 |
| Medellin | 11.2 | 9.44 | 2.4 | | | | 19.2 | 10.0 | 9.2 | | |
| Cali | 11.1 | 8.36 | 2.7 | | | | 22.3 | 11.1 | 11.2 | | |
| Barranquilla | 15.2 | 11.30 | 3.9 | | | | 26.3 | 12.95 | 13.3 | | |
| Bucaramanga | 7.4 | 5.50 | 1.9 | 8.38 | 2.45 | 10.38 | 13.3 | 6.93 | 6.4 | 10.26 | 8.41 |
| Manizales | 15.5 | 12.40 | 3.1 | | | | 21.2 | 13.89 | 7.3 | | |
| Ibague | 11.4 | 9.50 | 1.9 | | | | 16.4 | 11.25 | 5.1 | | |
| Popayan | 8.3 | 4.74 | 3.6 | | | | 14.1 | 7.36 | 6.7 | | |

[1]Weighted by total rather than male labor forces, using 1964 census figures.

Source: CEDE, Encuestus Urbanas.... op. cit.

income levels and so, according to our basic hypothesis would be expected to have lower unemployment levels. This latter hypothesis would also fit the limited data on small satellite towns (like Zipaquira) near Bogota. In 1963 the figures for Facatativa and Chia were comparable to those in Bogota and in Zipaquira they were much lower.[1]

Little research has to date been directed at the macroeconomic determinants of unemployment. Although this is not our chief concern here it is worth reviewing briefly the information on the relationship between the unemployment phenomenon and the general state of the economy. Frequently discussions of unemployment assume a simple positive relation between employment and output growth, implying thereby a simple negative relation between the growth rate and the level of unemployment. Superficial comparisons of the urban unemployment index presented in Table 1 and national accounts figures on the rate of growth of non-agricultural output (or of industrial output) suggest no clear relationship. (See Table A-2b.).

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[1] One might hypothesize that unemployment rates would vary among cities according to age structure of the active population, sex structure, degree of differentiation of occupations, occupational structure, wage rates for different types of occupations, and rate of increase of certain types of jobs, coupled with the past expectations as to the increase in jobs on the part of people who migrate in or out on the basis of such expectations. Little information is as yet available from the 1964 population census on occupational structure by city size.

Since the unemployment rate only moves away significantly from its typical 10.5-11% range in 1951 and 1966-67, any hypothesis must be based on characteristics of those or (perhaps) previous years. 1951 itself was a slow growth year, but succeeded a fast growth period; 1966 was high growth and 1967 slow growth. 1964 and 1965 were both high growth of non-agricultural output, and moderately so in industry. It is hard to make a case for a negative "growth rate-unemployment" relation using growth of any of the listed variables; a positive tie with a lag would receive more support but in general it is clear that these macro variables per se do not, in any simple way, explain the unemployment rate. With respect to the period 1953-1969, 1966 and 1967 appear fairly unambiguously to have had the highest unemployment rates. This would be consistent with unemployment rates being related to the rate of growth of urban output or urban industrial output with a small time lag. The years 1964-66 had a markedly faster rate of growth of urban product (6.3) than did the years 1967-68 (4.8%).

A similar but smaller difference exists between rates of growth of industrial output for the two groups of years. A lag is suggested by the fact that although 1963 was a year of slow growth in industry and urban product its rate of unemployment was not high relative to the succeeding years; this would be consistent with the fact that 1962 was a fast growth year and its effects were presumably still being felt in 1963. Similarly, although 1968 was a good year (especially with respect to 1967) the unemployment rate was still high; but it had fallen in 1969, consistent with the fact that this was a good year. And 1951, although not a year of dramatic growth itself (the terms of trade were somewhat worse than in 1950) followed the very rapid growth of the late forties; over the period 1948-50 the growth of the urban sector was perhaps around 9%, gross national income was growing at about the same percent and industry probably a little faster. Agriculture was not doing well so that the gross domestic product growth rate was not at all outstanding. Still, with the very rapid growth of national income and industry in the urban sector as a whole, it would not be surprising to find a relatively low urban unemployment rate in 1951.

Factors Bearing on the Welfare Cost of Open Unemployment

Among the important considerations in trying to evaluate the welfare meaning of the unemployed are the extent to which the unemployed are first time job seekers, their age and family status, the length of time unemployed, the previous occupation category or job sought, whether they are "marginal immigrants, etc. The hypothesis that much of the unemployment constitutes the luxury of being able to eschew undesired work while looking for an acceptable job to do is supported by considerable statistical evidence ralating to these variables. Over 60% of the unemployment registered in the eight cities surveyed in 1967 was of people

less than 25 years old (see Table 5); about 80% corresponded to people of less than 35 years old; people of less than 25 and less than 35 accounted for about 35% and 60% of the labor force respectively. The unemployment rate for people 15-24 ranges from 20% to over 30% in the 8 cities considered (weighted average, 26.5), tending to be somewhat higher for the larger cities; the figure for men was a little lower (ranging from 18 to 31%). For the age group 25-34 the range of unemployment rates for men was 2 to 14; for the group 35-44 it was 3.3 to 8.1;[1] weighted averages for the cities together are presented in Table 6. One-quarter of unemployed men were first time seekers and one half of unemployed women. The ILO study indicates that among the first time job seekers only a small percent were heads of families; most are wives, sons, daughters, or other relatives and a few are lodgers. Among the previously employed the number of heads of families is much higher--10 to 20 percent for women and in the large cities a third and more for men.[2]

The figures on age specific unemployment in 1970 indicate similar patterns to those just outlined. (See Table A-2) As nearly as can be made out in the face of different levels of precision and different universes, the relative rates for different age groups have been fairly stable in the period in question.[3] Bogota is the only base for different age groups which can be held constant across the three studies; Table 7 suggests that here too little change has occurred.

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[1] CEDE, op. cit., p. 97.

[2] I.L.O op. cit., p. 358.

[3] E.g. .....

Table 5

Open Urban Unemployment by Age and Sex, 1967
(Percentage of Total Unemployed)

| Age Group | Males | Females | Total |
|---|---|---|---|
| Under 15 | 3.1 | 2.3 | 2.7 |
| 15 to 24 | 52.3 | 63.0 | 57.2 |
| 25 to 34 | 20.9 | 23.0 | 21.8 |
| 35 to 44 | 10.6 | 7.8 | 9.4 |
| 45 to 54 | 7.8 | 3.4 | 5.8 |
| 55 to 64 | 3.7 | 0.3 | 2.2 |
| 65 years and over | 1.6 | 0.2 | 0.9 |
| Total | | | |

Sources and Methodology

The table is taken directly from ILO, op. cit., p. 364. The unemployment figures correspond to 1967 for the 8 cities studies by CEDE (Encuestas Urbanas de Empleo y Desempleo, op.cit., Table 18). The by city figures presented in that study were weighted by the 1964 economically active population of the cities.

Table 6

Age-Specific Rates of Open Urban Unemployment in 1967
(Percentage of active labour force unemployed)

| Age group | Male | Females | Total |
|---|---|---|---|
| Under 15 | 35.1 | 17.9 | 23.4 |
| 15 to 24 | 26.2 | 27.0 | 26.5 |
| 25 to 34 | 10.3 | 17.7 | 12.8 |
| 35 to 44 | 6.8 | 10.8 | 7.5 |
| 45 to 54 | 7.5 | 8.4 | 7.7 |
| 55 to 64 | 8.6 | 3.1 | 7.4 |
| 65 and over | 7.8 | 0.7 | 6.5 |

Source: ILO, op. cit., p. 364.

Table 8, presenting the distribution of the employed labor force by occupations, and the jobs sought by previously unemployed and first time job seekers, brings out two more of the characteristics cited in the statement of the hypothesis. While unemployment rates were fairly high for most occupational and sector categories in 1967 they were not, in general, higher for low income jobs than for high income ones. It is true that the professional and executive unemployment rates are only one-half the average, but the rates for the other two "white collar" categories are well above average; the rates for the blue collar and service categories are a little below average. The high white collar unemployment rate is due to the very disproportionate share of first time job seekers in that pool; the cesante rates are about the same for the nonprofessional-executive white collar category and for the blue collar service category.[1]

It appears that, for a substantial share of the unemployed, the income earned when employed is not particularly low. About one-third of the unemployed in the eight cities in 1967 can be quickly

[1] Corresponding to these facts, it is interesting to observe that the unemployment rate (former job holders) is not markedly different for people of differing levels of education except for the post-secondary level. (Probably age specific unemployment rates by level of education do differ more; and underemployment, measured in months not worked is a clear negative function of education level according to data from the 1964 population census; this data is weak, however.) Thus in 1967 in the 8 cities studied by CEDE, among men a little over 30% of the unemployed former job holders had secondary or post-secondary education and about 21.5% of the women did; the unemployed new entrants to the labor force were somewhat more educated.

Table 8

**Percent Distribution of Occupations Sought by Open Urban Unemployed, 1967, By Category**

| Occupation Group[1] | Percent Distributions: Previous Job holder | First-time Job seeker | Total | Employed Labor force | Unemployment Rate Index[2] | |
|---|---|---|---|---|---|---|
| Professional | 3.1 | 5.4 | 4.0 | 7.4 | 0.57 | .50 |
| | 3.8 | 5.7 | 4.6 | 9.2 | | |
| Executive | 0.7 | 0.3 | 0.6 | 1.8 | 0.33 | |
| Clerical | 19.2 | 34.0 | 24.5 | 14.4 | 1.70 | 1.29 |
| | 29.9 | 53.0 | 38.1 | 29.5 | | |
| Sales staff | 10.7 | 19.0 | 13.6 | 15.1 | 0.90 | |
| Rural Workers | 1.3 | 0.1 | 0.9 | 2.0 | 0.45 | 0.91 (or 1.05 without domestic servants) |
| Miners | 0.4 | 0.3 | 0.3 | 0.3 | 1.00 | |
| Transport workers | 6.4 | 1.9 | 4.7 | 5.7 | 0.82 | |
| Craftsmen | 40.1 | 33.3 | 23.1 | 30.4 | 33.5 | 54.0 | 30.5 | 59.6 | 1.10 | |
| Laborers | 2.4 | | 3.1 | | 2.7 | | 2.4 | | 1.12 | |
| Service Workers | 10.8 | | 9.1 | | 10.3 | | 8.8 | | 1.17 | |
| Domestic Servants | 1.9 | | 0.8 | | 1.6 | | 9.9 | | 0.16 | |
| Defense and Police | 0.3 | | --- | | 0.2 | | 1.0 | | 0.20 | |
| Others | 2.7 | | 2.9 | | 2.7 | | 3.7 | | 3.85 | |
| Total | 100.0 | | 100.0 | | 100.0 | | 100.0 | | 100.0 | |

[1] As described by respondent.

[2] Defined as "unemployment rate of category/average unemployment rate of all categories."

Source: ILO, op. cit., p. 366.

excluded from what one might call "poverty level" unemployment.[1] People seeking professional and executive jobs in particular, are normally not poor by Colombian standards. In 1967 the three categories accounted for 29% of all unemployment, corresponding to 23% of the previous job holders and about 40% of first time job seekers.[2] Since the three groups form only 23.6% of the employed labor force, it is seen, as noted above. that their unemployment rate was above average. This being due to the particularly high first time job seeker rate in the clerical category. Table 8 also indicates that domestic servants (here calculated at about 10% of the employed labor force) provided a very small part of the unemployment pool. These people are well down in the income distribution--for them unemployment is clearly less a problem than the low income itself (though the welfare level of domestic servants is hard to measure in economic terms because of their special condition of usually having at least adequate food and lodging, and often being unmarried).

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[1] A minimum of 25 percent of the previous job holders are looking for jobs with incomes which would place them (roughly) in the top quarter of urban income earners and almost one-half of the first time job seekers are. These estimates are minima, since only professional, executive, and clerical plus a small percent of other categories; were included. The first figure could be as high as 45%.

CEDE's 1967-69 family budget survey provides the only evidence to date on the relative expenditures of families with an unemployed head. It is revealing that the composition of consumption of families with unemployed heads suggest that these families are probably at about the same absolute level as the obrero category in general.[1] If it is true that the younger unemployed who are searching for high income jobs are better off than the group who are family heads, then their consumption patterns probably put them rather high in the "consumption distribution."

Our overall hypothesis would imply below average unemployment rates in poor barrios. The limited evidence on unemployment rates at the barrio level is inconclusive. In a comparison of three Bogota barrios in 1962 Stand found slightly lower unemployment in a low income barrio than a middle income one; both were higher than the rate of a high income barrio.[2] Studies of low income barrios in various cities in the late 60s revealed unemployment rates for family heads varying from well below the city averages (where everyone -- not just family heads --- was included) in some cases to well above it in others. With the exception of the inquilino sample in Bogota, the figures tend to

[1]High total consumption is closely related to the share of expenditures going to food; this share was about the same for the two groups compared here.

[2]Miguel A. Antequera Stand, Ocupacion y Desocupacion en Bogota: Las Ferias, CEDE, Universidad de Los Andes, Bogota, Julio 1962. Stand found first time job seeker unemployed rates of 2.27, 9.48 and 8.24 in the high (Los Alcazares), middle (Quiroga) and low (Las Ferias) income barrios; the "previously employed" unemployment rates were, respectively, 5.45, 9.48 and 8.62. The share of the labor force who were independent workers or family helpers was 11.6, 18.1 and 25.0 in the three cases. Probably commerce contributed a lot to this job category; its importance was 12.8%, 11.7% and 21.7% respectively. Construction and manufacturing generated more than half the unemployment in Las Ferias but less than one quarter in the other barrios.

be below average for the cities. The age structures for two barrios for which this data was tabulated was not disproportionately found in the low employment age ranges relative to the city as a whole.

Another component of our hypothesis was that immigrant unemployment rates would be , if anything, below average for the total population, and that migrants would not, in some sense, constitute the core of the overall problem. In 1967 it was true, for all 8 of the cities studied, that average unemployment rates were higher for natives of the city than for immigrants from elsewhere in the

Table 9

Family Head Unemployment Rates in Low Income Barrios, Compared to City Wide Averages

| | Barrio Family Head Unemployment Rates | City-wide Rates in same year |
|---|---|---|
| Invasion Barrios | | |
| Las Colinas - Bogota 1967 | 6.3 | 12.2 |
| Fatima, Francisco: Cali - 1968 | 3.3 | 14.9 (May) |
| Buena Esperanza - Barranquilla 1968 | 10.0 | (18.4 in Oct/67 - no observation in 1968) |
| San Martin, Ancon Taquanquilla - Santa Marta | 7.1 | |
| "Pirata"Barrios | | |
| Alcala - Bogota - Early 71 | 12.0 | |
| Acacia - Bogota - 71 | 8.0 | |
| Alquerea - Bogota - 71 | 14.0 | |
| Official Housing | | |
| Los Laches - Bogota - 1968 | 9.2[a] | 11.5 |
| La Floresta - Cali - early 71 | 8.5 | |
| Inquilinos | | |
| Afiliados of Provivienda - Bogota - 1968 | 21.5[a] | 11.5 |

Source: The data of the first column comes from unpublished studies of the Urban and Regional Unit of Planeacion Nacional, 1971, the original sources being a number of separate studies of the cited barrios. The data of Col. (2) comes from Table A-1.
It must be remembered that "barrio" studies are often difficult to compare with other sources in terms of unemployment rates and similar variables; their questions may be different and may not be so carefully applied.

[a] In these cases the sample apparently included the whole population, not just family heads.

department or other departments they were sometimes higher for immigrants from the same department than for those from other departments, although this relationship varied considerably from city to city (See Table 10). Ascertaining whether immigrant and native status really bears on the tendency to be unemployed requires disaggregation by age rate,[1] by occupation, by the type of unemployment (cesantes vs. aspirantes), etc.

We may note first that the 'cesante' rate differs considerably less by place of origin than the overall unemployment rate, whereas the first job seekers rate varies markedly- usually being 50 to 100 percent or more higher for natives than for immigrants (See Table 10). This suggests that the immigrants tend not to come to the city without a job, especially those coming from the same department, who are presumably looking for lower income jobs· for this group the first time seekers rate tends to be in the range 2 to 4 percent whereas for natives it is seldom below 6 percent. Unfortunately no calculations of age specific unemployment rates (of both types) by whether persons are immigrants or not have been made. In the absence of such information we have performed a crude test of the null hypothesis that age specific unemployment rates are identical for natives and each of the two groups of immigrants. By assuming that the average relationship between age and unemployment rate for a

[1] The fact that the average participation rates are much lower for natives of the city than for people born elsewhere (see Table 10) is consistent with the known fact that there are important differences in age distribution, the natives tending to be younger.

given city holds for natives and for immigrants, one can calculate a "predicted' unemployment rate for each group.[1] This exercise was somewhat inconclusive for Bogota, as information on place of origin was missing for a substantial share of the unemployed; it appeared, however, that the actual/predicted unemployment rate ratios were about as follows: natives, 1.23; immigrants from Cundinamarca, 0.85; immigrants from other departments, 1.06. Another somewhat crude calculation for Medellin[2] yielded the following indexes: natives, 1.03, immigrants from Antioquia 1.15 and immigrants from other departments 0.70. In Cali the indices are similar to those for Bogota (using the same methodology as for Medellin), i.e. natives 1.14, immigrants from Valle 0.92 and immigrants from other departments 0.94 and immigrants from other departments 0.9%. The situation clearly varies from city to city, but at least for 1967 one would conclude that on average the age specific unemployment rates were about 20% higher for natives than for immigrants;[3] whether the year was atypical

[1]I.e. by using information on age structure of each group, from the 1964 population census.

[2]In this case crude because of lack of precise age structure data for the 3 groups, as a result of which the Bogota age structure data are applied to Medellin.

[3]Note, that for Bogota (I do not know of information for other cities) average educational levels of the population in each age group are higher for natives than for immigrants, if the same may be assumed for the economically active population, this is further evidence that the observed lower unemployment rate of the migrants is not explainable in terms of a different age, sex/ education combination which would be consistant with unemployments' being a more serious problem for migrants, other things being equal. If migrants had more education at each age level, and education were negatively correlated with unemployment at a given age, this might explain the lower average age specific unemployment rate of migrants. Since the premise is false, it cannot do so. (See Rafael Prieto T., "Causas del Desempleo en Colombia," in Empleo y Desempleo en Colombia, CEDE, Universidad de Los Andes, Bogota, 1968, p. 179).

Table 10

Rates of Participation and Unemployment by Place of Birth:
Eight Cities

1967

| | Participation Rates | | | Unemployment Rates | | | | |
|---|---|---|---|---|---|---|---|---|
| | Men | Women | Total | Men | Women | Total | Cesantes | Aspirantes |
| **Barranquilla** | 42.2 | 16.5 | 28.9 | 15.2 | 26.3 | 19.4 | 11.74 | 7.66 |
| Natives | 34.0 | 13.9 | 23.7 | 17.6 | 30.3 | 21.3 | 13.03 | 8.27 |
| Same Department | | | | | | | | |
| Other Department | 57.0 | 23.8 | 43.3 | 11.4 | 20.4 | 14.1 | 9.84 | 4.26 |
| **Bogotá** | 45.9 | 24.0 | 34.2 | 14.9 | 17.9 | 16.0 | 9.98 | 6.12 |
| Natives | 28.8 | 16.1 | 22.0 | 20.0 | 26.5 | 22.5 | 12.4 | 10.1 |
| Same Department | 74.5 | 40.9 | 55.4 | 11.0 | 12.5 | 11.8 | 8.23 | 3.37 |
| Other Department | 50.9 | 25.6 | 37.5 | 14.1 | 16.3 | 14.9 | 9.79 | 5.10 |
| **Bucaramanga** | 43.2 | 25.4 | 33.5 | 7.4 | 13.3 | 9.8 | 6.04 | 3.76 |
| Natives | 27.4 | 18.3 | 22.7 | 10.1 | 15.6 | 12.3 | 6.74 | 5.57 |
| Same Department | 70.4 | 35.5 | 29.3 | 6.0 | 11.1 | 8.2 | 5.54 | 2.65 |
| Other Department | 62.3 | 27.3 | 43.9 | 4.9 | 14.6 | 8.1 | 5.67 | 2.43 |
| **Cali** | 45.1 | 21.1 | 32.5 | 11.1 | 22.3 | 14.9 | 9.30 | 5.6 |
| Natives | 24.0 | 17.1 | 20.6 | 14.2 | 26.6 | 19.3 | 10.69 | 8.61 |
| Same Department | 73.3 | 22.5 | 46.9 | 9.2 | 13.2 | 11.6 | 8.0 | 3.60 |
| Other Department | 71.3 | 26.7 | 46.1 | 10.1 | -19.9 | 13.3 | 8.95 | 4.36 |

Table 10 (continued)

| | Participation Rates | | | Unemployment Rates | | | | |
|---|---|---|---|---|---|---|---|---|
| | Men | Women | Total | Men | Women | Total | Cesantes | Aspirantes |
| Ibague | 42.6 | 21.0 | 31.4 | 11.4 | 16.4 | 13.1 | 10.08 | 3.02 |
| Natives | 27.7 | 17.2 | 22.2 | 16.0 | 19.9 | 17.6 | 14.62 | 2.98 |
| Same Department | 59.9 | 30.3 | 43.9 | 10.7 | 15.6 | 12.5 | 8.72 | 3.78 |
| Other Department | 60.4 | 17.5 | 39.2 | 6.6 | 8.5 | 7.0 | 5.13 | 1.87 |
| Manizales | 43.3 | 20.6 | 31.6 | 15.5 | 21.2 | 17.4 | 12.87 | 4.53 |
| Natives | 33.2] | 13.8 | 23.8 | 19.4 | 24.2 | 20.8 | 13.68 | 7.12 |
| Same Department | 57.8 | 29.0 | 41.8 | 13.3 | 21.2 | 16.3 | 13.71 | 2.59 |
| Other Department | 60.6 | 27.6 | 42.2 | 10.6 | 16.9 | 12.9 | 10.32 | 2.58 |
| Medellin | 43.0 | 21.7 | 31.6 | 11.8 | 19.2 | 14.5 | 9.64 | 11.86 |
| Natives | 26.1 | 15.0 | 20.5 | 12.3 | 24.7 | 16.9 | 10.72 | 6.16 |
| Same Department | 63.6 | 28.0 | 43.4 | 13.4 | 15.4 | 14.1 | 10.00 | 4.11 |
| Other Department | 57.8 | 27.4 | 41.2 | 3.7 | 21.3 | 10.1 | 5.35 | 4.75 |
| Popayan | 43.7 | 27.3 | 35.0 | 8.3 | 14.1 | 10.8 | 5.87 | 4.93 |
| Natives | 34.8 | 20.4 | 27.4 | 9.0 | 20.9 | 13.5 | 6.89 | 6.61 |
| Same Department | 62.7 | 47.0 | 53.4 | 5.6 | 5.5 | 5.5 | 3.5 | 2.0 |
| Other Department | 59.3 | 29.8 | 42.1 | 8.9 | 14.1 | 11.1 | 6.34 | 4.76 |

Source: Isasa and Ortega, op. cit., pp. 111-112, except for the last two columns, which were calculated by the author from data in the statistical annex of the cited study.

is hard to judge. And unfortunately it is impossible to ascertain without more information whether unemployment rates may have been higher for immigrants in some age categories even though lower on average. Without taking account of differences in age structure, these indices for the three cities taken together would be 1.33, 0.80 and 0.86 respectively. Thus, age structure differences appear for each of the three groups, to account for about one half of the difference from average (i.e. from 1.00).

It is generally accepted, on the basis of studies of the migration process that interdepartmental migrants tend to have higher paying jobs, more education, and so on than intra-departmental migrants. this is especially the case with respect to people migrating to urban jobs.[1] Simmons' data in his study of migration to Bogota[2] is revealing in this context. Table 11, taken from his study, shows the much lower tendency of the short distance immigrants[3] to be found in the upper of three strata[4] and higher tendency (than native born persons and especially than immigrants from other departments) to be found in the lowest stratum. The "other department" migrants are, as can be seen, at slightly higher

[1]See, for example, Departamento Nacional de Planeacion, "La Poblacion de Colombia: Diagnostico y Politica," Revista de Planeacion y Desarrollo, Vol. 1, Numero 4, December 1969, p. 43. The ratio of immigrants born in a different department to residents is over 40% for professionals, technicians, people in personal services, and salesmen, at little below 35% for manual laborers, and about 38% for white collar workers excluding the professionals already referred to. The difference as indicated by these figures probably underestimates the difference among these groups in average distance migrated since it seems probable that a number of low occupation short distance migrants cross departmental lines.

[2]Alan B. Simmons, The Emergence of Planning Orientations in a Modernizing Community: Migration, Adaptations and Family Planning in Highland Colombia, Cornell University, Latin American Studies Program, Dissertation Series #15, April 1970.

[3]In this case, from Cundinamarca and Boyaca, a categorization rather parallel to the "same department" one used above.

[4]Simmons classification by "social stratum" can be safely taken as providing a good proxy for income levels.

Table 11

Distribution of the Migrants and
Native Born Men (Age 15-59) in Bogota
By Sample Strata

| Social Strata in Sample | A (High) | B (Middle) | C (Low) | Total |
|---|---|---|---|---|
| MIGRANTS* | | | | |
| From Boyaca and Cundinamarca | 5 | 38 | 57 | 100 |
| From other departments | 23 | 43 | 34 | 100 |
| All migrants | 10 | 36 | 54 | 100 |
| NATIVE BORN* | 23 | 34 | 43 | 100 |
| TOTAL POPULATION OF BOGOTA** | 15 | 38 | 47 | 100 |

*Source: Pre-interview census of 3,579 randomly selected men, aged 15-59, Bogota, 1968.

**Source: Special tabulations of the 1964 census.

Source: Simmons, op. cit., p. 97.

stratum than native born people (the difference relating only to the lower two categories), though some of this difference could be associated with a difference in age structure.

Overall, recent years have seen a substantial buildup of information (of interest in the analysis of unemployment) on a number of aspects of the immigration process.[1] How much difficulty do migrants have in obtaining jobs;[2] do they progress in terms of income and occupation after arriving; do many leave the city again as a result of failure; is job searching becoming more difficult over time and/or the quality of the migrants diminishing (as sometimes argued)?

Simmons' analysis focussed on a selection of municipios in Boyaca and Cundinamarca -- he studied migrants in Bogota from these areas, as well as people living in them -- including return migrants. For all distinguishable periods of time the migrants were primarily from the small towns and not from the rural areas; they do seem to have been disproportionately from the small towns of the Bogota vicinity, rather than from the larger ones.[3] The fact that only 22% of the migrants reported the vereda as their place of origin is even more striking with respect to the earlier periods than the later ones, since even more than the 67% living in these places in 1964 would

[1]Particularly useful in this connection is Simmons' study cited above.

[2]Their low unemployment rate does not prove they do not have serious troubles -- troubles which could lead to re-emigration, accepting very undesirable jobs, etc.

[3]The fascinating result that migrants are disproportionately from pueblos rather than rural areas, but at the same time less than proportionately from localities with cities of 15,000 or more (Simmons, op. cit., p. 100) may be somewhat biased by the fact that the size definition of the pueblos is that of 1964 and that some of the migration referred to occurred substantially before that. That the selectivity described (small towns vs. cities) occurred in the period 1959-69 is clear, but that it occurred in the previous years is not clear, and very likely not true.

Several other studies provide somewhat comparable information on migration patterns: Carlos Garcia, Caracteristicas de los Inmigrantes en Cinco Ciudades Colombianas, CLDE, Universidad de Los Andes, Bogota, 1970; T. Paul Schultz, Population Growth and Internal Migration in Colombia, Rand Corporation, Memorandum RM-5765-RC/FF, July 1969.

have lived there earlier. The rural sample (essentially small towns) showed a substantial number of return migrants; between 20 and 30% in the towns in question had spent some time in a large city, usually Bogota. The migrants tended to come predominatly from land owning and commercial families in the rural towns; in each stratum they tended to have one year less formal schooling than the native born Bogotanos:[1] In the city as a whole this difference was about two years because of different distribution across the strata.[2] A fairly large proportion of migrants (23% of those in the city and 32% of those who have returned) received some schooling in the city; one of the reasons for the arrival of upper strata children was clearly to obtain more education; on the average the return migrants have higher levels of education than the migrants who stayed in Bogota.

After comparing a group of migrants to rural non-migrants and to native born urban dwellers, Simmons found that modernity of response, mental flexibility and a number of other such variables increased with number of years of urban experience, especially for people with relatively low amounts of formal education, so that recent migrants frequently differed little if at all from rural counterparts with the same measured characteristics, whereas after ten or more years they approached the characteristics of people born in the cities, other things being equal.[3]

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[1] Ibid., p. 103.

[2] Garcia (op.cit.) found a difference ranging from 0.6 to 1.3 in his random sample of employed persons in five cities in 1967; the Bogota difference was 0.9. The difference between this figure and Simmons' would suggest that the non-employed immigrants have lower educational attainment vis a vis the employed ones than is the case for natives; (or that these are data problems).

[3] This rather optimistic note seems to be matched by most serious

It is frequently hypothesized that recent migrants to Bogota are of lower quality than the better educated and more skilled streams of migrants who came earlier in time. This could imply increasing employment and other problems. Simmons, data, however, tended to refute this hypothesis.[1] Garcia's study (op.cit.) is consistent with Simmons, the average differential for the five cities (weighted by labor force) was 0.25 more years for natives in the 15-24 age group and 0.07 more years for natives in the 20 and up age group.

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footnote 1 continued from previous page.

studies undertaken in other countries.

Nelson (op. cit.) feels that the literature has frequently over-emphasized the shock of urban life, failing to take into account the fact that many urban migrants come from smaller cities or towns and many more are close to the city, have visited it, and otherwise come to know something about it. (as observed by Simmons in his study). The traditional rural social structure has been eroded in all except the most remote areas in Latin America. (See Marshall Wolfe, "Some Implications of Recent Changes in Urban and Rural Settlement Patterns in Latin American," paper presented at the U.N. World Population Conference (Belgrade, September 1965), p. 25.

Nelson also notes that the theory that migrants are disruptive has little empirical support; the evidence tends to go the other way--as exemplified by studies in India, Chile, and 19th century France.

Nelson's feeling is that formation of class consciousness and class based political organization is improbable due to the highly individual needs of the very poor plus their distrust, lack of organizational experience, lack of shared work experience and conditions of life, the considerable percent living beside aspiring middle class people in squatter's settlements, and the subjection to the diluting effect of the constant inflow of rural migrants. Emergence of a strong urban populist party appealing to the urban marginals, industrial labor, and perhaps low level white collar groups seems more likely--it would stress employment, public works, housing, etc. Another possibility is a gradually increased responsiveness to the needs of the urban poor on the part of one or more of the established political parties.

[1] There appears to have been no general increase in average years of education of the migrants, age of arrival held constant; for some age groups an increase has occurred but for others the opposite seems to have been true. The author concludes that this implies a decrease in average selectivity of the migrants but not a decrease in [illegible]

There appeared to be no trends over time in the difficulty of getting work or in the status of the work the immigrants were able to get.[1] In all periods about 40% received help from friends to get their first job and roughly 80% found work within the first two months of arrival,[2,3] it is not clear whether these proportions are

[1]Ibid., p. 112.

[2]This relative success in getting jobs is consistent with the experience in other countries. The large majority of immigrants to large cities in Latin America require relatively little time to find a job. Samples taken in Santiago, Buenos Aires and six Brazilian cities showed that 65-85 percent found jobs within one month (depending on the city), although data are not presented for all cities it appears that 40-60 percent find jobs immediately (or already have them). (See Joan M. Nelson, Migrants, Urban Poverty and Instability in Developing Nations, Harvard University Center for International Affairs, Occasional Papers on International Affairs, #22, September 1969, p. 15).

Joan Nelson,("The Urban Poor: Disruption or Political Integration in Third World Cities, World Politics.) also notes

> that there are consistently lower rates of open unemployment among migrants than among native urbanites, as indicated in Colombia, Chile, India, and Pakistan. This presumably reflects age structure in part, for Colombia, as noted above, this factor does not account for the full difference. The few surveys that compared current jobs or first job in the city with jobs before migration show considerable upward mobility. (Ibid., p. 399).

[3]For native born job seekers, comparable support would presumably be much higher, at least for housing and financial assistance., which in most cases would be given almost by definition.

higher for lower strata immigrants or not. It does appear that considerable upward mobility in job status takes place over an extended period of time, with inter-generational upward mobility seeming to be greatest for those arriving young in the city; those who arrived after age 25 show very little such mobility,[1] generally the migrant's first job in the city is lower than his father's typical occupation, but after 10 years he has equalled or surpassed his father's status. Since recently arrived migrants differ very little in work complexity scores from rural non-migrants with the same schooling, this suggests that the more complex jobs that the earlier migrants have attained over time is part of an occupational mobility process.

Valuable evidence on the extent of return migration as a safety value for unsuccessful employment experience in the city is provided by Simmons. He feels that there is no evidence to suggest that return migrants to the rural areas are predominantly composed of men who have failed in the city. Although not by way of proof, the data of Table 12 suggest that return migrants from Bogota to the surrounding highlands of Boyaca and Cundinamarca are characterized by a better than average opportunity in their place of origin. The percent whose [illegible] fathers were farm owners or white collar people was 72 for migrants who did not return this porportion was 63% and for non-migrants 48%.

[1] Simmons, op. cit., p. 14.

While these might still be an element of "failure in the city" involved in the decision to leave, it seems unlikely that it could have been the sole, and probably not even the major factor. All this tends to suggest that the return migrants had relatively attractive alternatives outside the city and that this is what drew them out again.[1] Just as unemployment appears not to be a characteristic of the "worst off", neither does return migration. The individuals have higher levels of education than those who remain (and much higher than those who did not migrate out of the rural areas). They had less difficulty in finding their first urban job (95% had it within two months compared to less than 80% for the other migrants).[2]

In general, migrants tend to report that they are better off as a result of the move.

What then, to summarize, can be said of the migration-unemployment relationship? It would seem that the most plausible interpretation of the lower unemployment rate for migrants would be some combination of

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[1] An entirely different "migration" phenomenon should perhaps be referred to in passing. In some parts of the country (especially the northern coast area) workers move (shuttle) back and forth between agriculture (frequently as crop pickers) and urban (often construction workers) on a seasonal basis. These people, more likely to dwell in towns or cities, cannot be thought of as migrants in the sense used in the rest of the present discussion. The phenomenon is of interest, however, as evidencing once again the quite substantial market response elements which go into the allocation of labor across sectors and between rural-urban.

[2] Ibid., p. 22.

Table 12

Occupation and Education of the
Fathers of Migrants and Rural Non-Migrants*

| Sample | Eleven Rural Village and Towns | | Bogota |
|---|---|---|---|
| | Non-Migrants | Return Migrants | Migrants from Rural Boyaca/Cundinamarca |
| (N =) | (191) | (53) | (461) |
| Percent distribution of father's occupation | | | |
| Landless agricultural workers and renters of small plots | 46 | 23 | 33 |
| Farm owners | 30 | 47 | 32 |
| (Total Agriculture) | (77) | (70) | (65) |
| Commerce, services and other white collar | 18 | 25 | 31 |
| Construction, transport and other blue collar | 5 | 6 | 5 |
| TOTAL+ | 100 | 100 | 100 |
| Mean status of father's occupation[a] | 2.1 | 2.8 | 2.3 |
| Father's schooling (mean years) | 2.1 | 4.3 | 2.8 |

*Source: Interview sample of married men, age 20-54, in Bogota and in eleven selected towns of Boyaca/Cundinamarca. The urban figures take into account the distribution of migrants by sample strata.

+Columns do not always total 100 percent, due to rounding.

[a]Occupational status scored on a six point scale from 1 "unskilled manual, to 6, "owners-manager. Father's occupation was defined as his customary occupation. Details of the status classification may be found in Table 3-1 (of Simmons, op. cit.).

Source: Simmons, op. cit., p. 108.

(a) a tendency, especially for those in the low skill categories (frequently coming from the same department) to make sure that the job is there or that there is a high probability of its being there before migrating, (b) greater willingness to accept low income and prestige jobs in the first place, and (c) relative inability to remain jobless for long and opportunity to return to place of origin. Meanwhile native born people, because their families live in the city and have a higher average wealth level are able to sustain a longer period of unemployment before being forced to take a job they did not want, leave the city, or whatever. It cannot perhaps be proven that the average lifetime income of the immigrants is lower than that of the native born people, but it seems a foregone conclusion for the "same department migrants.

The fact that the rapid rural to urban migration goes on in the face of the unemployment might be adduced as evidence that people choose to risk becoming unemployed in urban areas when in fact they could have remained employed in agriculture, the argument usually presented is that the urban income is sufficiently above the rural one so that the expected value of it, even after allowing for the possibility of unemployment, is higher than the rural income.[1] On the other hand the evidence is that migrants are rather careful about planning jobs before they come to the city, and as a result

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[1] See, for example, Michael Todaro, op. cit.

have very low 'looking for first job' ratios there.[1] There is no evidence of a very large income differential (unless the 20-30% typically separating the urban construction worker and the agricultural laborer be considered large) it is true that educational, health and other aspects of living conditions are better in the city these could constitute a strong pull factor. Thus it appears that if the rural-urban migration flow is a significant cause of the urban unemployment, its impact must operate in considerable degree through the increased competition in the job market which these migrants create for the natives of the city.[2]

Since, however, many of the latter group are looking for white collar jobs and many of the migrants for blue collar ones, the opposite seems at least as likely i.e. that the large reservoir of blue collar labor increases the demand for most types of white collar labor. In terms of competition for native blue collar workers, the evidence would rather suggest that migrants react to income differentials. They are unlikely to flood the urban market in disregard for the wage

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[1] It is interesting to note that, in the case of Bogota, if reasonable guesstimates are made as to the precise 'time unemployed' profile of immigrants to Bogota, those in the 'waiting line' before acquiring their first job would contribute about 0.3 points to the overall employment rate. (Calculation based in part on data from Simmons, op. cit., p. 112).

It is theoretically possible of course, that the immigrants be particularly prone to becoming unemployed after already having a job. but the figures do not indicate this--See Table 10. Since they are not standardized for age, it si impossible to be sure. whether cesante rates are lower or higher for migrants.

[2] It is a fact, of course, that a large share of the urban unemployed are immigrants. Table 13 presents a distribution of unemployment by place of birth in the 8 Colombian cities studies by CEDE in 1967; about 52% of all the unemployed in that year were not born in the cities where they sought work the 25% who were born in the same department were probably from small towns or rural areas. Thus, although, migrant unemployment rates are lower than those of natives, because such a large share of the labor force of these eight cities are migrants (69%), they form a large share of the unemployed.

or unemployment impact. This is suggested in part by their relatively low unemployment rates (especially aspirante rates) and by the close relationship over time between, for example, the agricultural wage rate and the urban unskilled construction worker wage. (See Table 14).

Duration of Unemployment

In most cities in 1967 a quarter to a third of the unemployed had been without jobs for a year or more, and one-half to two-thirds for more than three months. The median length of time without work for the previously employed is a little under three months for most categories, though only about five weeks for domestic servants and executives (See Table A-8). First time job seekers had a median waiting period of four to five months, and 30% were looking for a job for one year or more (compared with 22% of the previously employed).[1] The category "laborers", which appears to refer to unskilled workers who are not classified as craftsmen and who form 2.4% of the labor force in the cities on which this sample is based, had particular difficulties, people previously employed in this category had a median hunting period of over one year.[2]

The time structure of Colombia's unemployment in 1967 appeared not to differ much from that typical of a high unemployment

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[1]Women do require much longer on average to find their first job than men, so that while two-thirds of the unemployed with previous work experience are males, only two-fifths of the unemployed new entrants are male.

[2]Since this category is so small, the possibility arises that employment difficulties may be involved in the respondent's defining himself into it, in which case the observed unemployment rate may have little meaning.

Table 13

Percent Distribution of the Unemployed in Eight Colombian Cities, by Origin and Type of Unemployment

| | MEN | | | WOMEN | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Previously Employed | First Job Seekers | Total | Previously Employed | First Job Seekers | Total | Previously Employed | First Job Seekers | Total |
| Natives | 43.48 | 60.59 | 47.60 | 46.15 | 51.29 | 48.65 | 44.49 | 54.61 | 48.09 |
| Same Dept. | 28.29 | 26.50 | 26.50 | 26.30 | 19.54 | 23.02 | 27.54 | 20.00 | 24.86 |
| Other Dept. | 28.23 | 18.59 | 25.90 | 27.54 | 29.16 | 28.33 | 27.97 | 25.39 | 27.05 |

Source: Data from CEDE, Encuestas Urbanas de Empleo y Desempleo, op. cit., Annexo Estadistico.

Agricultural Wages and Unskilled Construction Wages,
Bogota and Cundinamarca (1935-1971)
(all wages expressed in current pesos per day)



| Year | Unskilled Construction Workers: Bogota | Agricultural Salaries: Cundinamarca | Agricultural Salaries: Cold Climate, Cundinamarca |
|---|---|---|---|
| 1935 | (.80) | | |
| 1936 | (.75) | | |
| 1937 | (.93) | | |
| 1938 | (.94) | 0.60 | 0.60 |
| 1939 | (.96) | 0.60 | 0.60 |
| 1940 | (.95) | 0.80 | 0.80 |
| 1941 | (.94) | 0.90 | 0.90 |
| 1942 | (.92) | 0.60 | 0.60 |
| 1943 | | 0.60 | 0.60 |
| 1944 | | 0.90 | 0.80 |
| 1945 | | 1.05 | 1.00 |
| 1946 | | 1.50 | 1.50 |
| 1947 | | 1.75 | 1.50 |
| 1948 | | 1.35 | 1.70 |
| 1949 | | 2.05 | 2.00 |
| 1950 | 2.20 | 2.50 | 2.30 |
| 1951 | 2.38 | 2.90 | 2.60 |
| 1952 | 2.48 | 2.70 | 2.40 |
| 1953 | 2.60 | 3.15 | 2.55 |
| 1954 | 2.74 | 3.42 | 2.90 |
| 1955 | 2.93 | 3.67 | 3.25 |
| 1956 | 3.00 | 3.92 | 3.35 |
| 1957 | 4.30 | 4.37 | 3.90 |
| 1958 | 5.01 | 5.05 | 4.50 |
| 1959 | 6.00 | 5.25 | 4.75 |
| 1960 | 6.50 | 5.90 | 5.25 |
| 1961 | 7.60 | 6.50 | 5.80 |
| 1962 | 8.50 | 7.10 | 6.55 |
| 1963 | 10.20 | 9.15 | 8.40 |
| 1964 | 12.55 | 10.10 | 9.75 |
| 1965 | 15.00 | 11.65 | 11.60 |
| 1966 | 16.00 | 13.72 | 12.60 |
| 1967 | 17.00[a] | 15.67 | 14.20 |
| 1968 | 18.00[a] | 16.80 | 14.50 |
| 1969 | 19.00[a] | 18.50 | 17.22 |
| 1970 | 20.00[a] | | |
| 1971[b] | 21.57 | | |

[a] Interpolated by guessing.

[b] 20.37 + 1.5 without fringe benefits for the new benefits.

[c] First semester.

Source: A. Berry, "Some Determinants of Changing Income Distribution in Colombia, 1930-1970," Discussion Paper #137, 1972.

year in the U.S. Diagram 1 shows the aggregate time-unemployed profile for the eight cities of CEDE's 1967 survey and profiles for the U.S. in 1958 (relatively high unemployment) and 1969 (low unemployment). In both years the ratio $\frac{\%\text{ unemployed at least X weeks-Colombia}}{\%\text{ unemployed at least X weeks - U.S.}}$ rises with X, i.e. long term unemployment is proportionately (to short term unemployment) more severe in Colombia than in the U.S., but the difference is not marked when the comparison is made with the 1958 U.S. figures; for 1969 it is very marked, with the Colombian very short term rate being about twice that of the U.S. whereas the twenty week unemployed rate is seven or eight times as high. The comparison of the 1958 and 1969 profiles for the U.S. suggests a high elasticity of long term unemployment to the total unemployment rate, and the Colombia profile is consistent with such an elasticity.

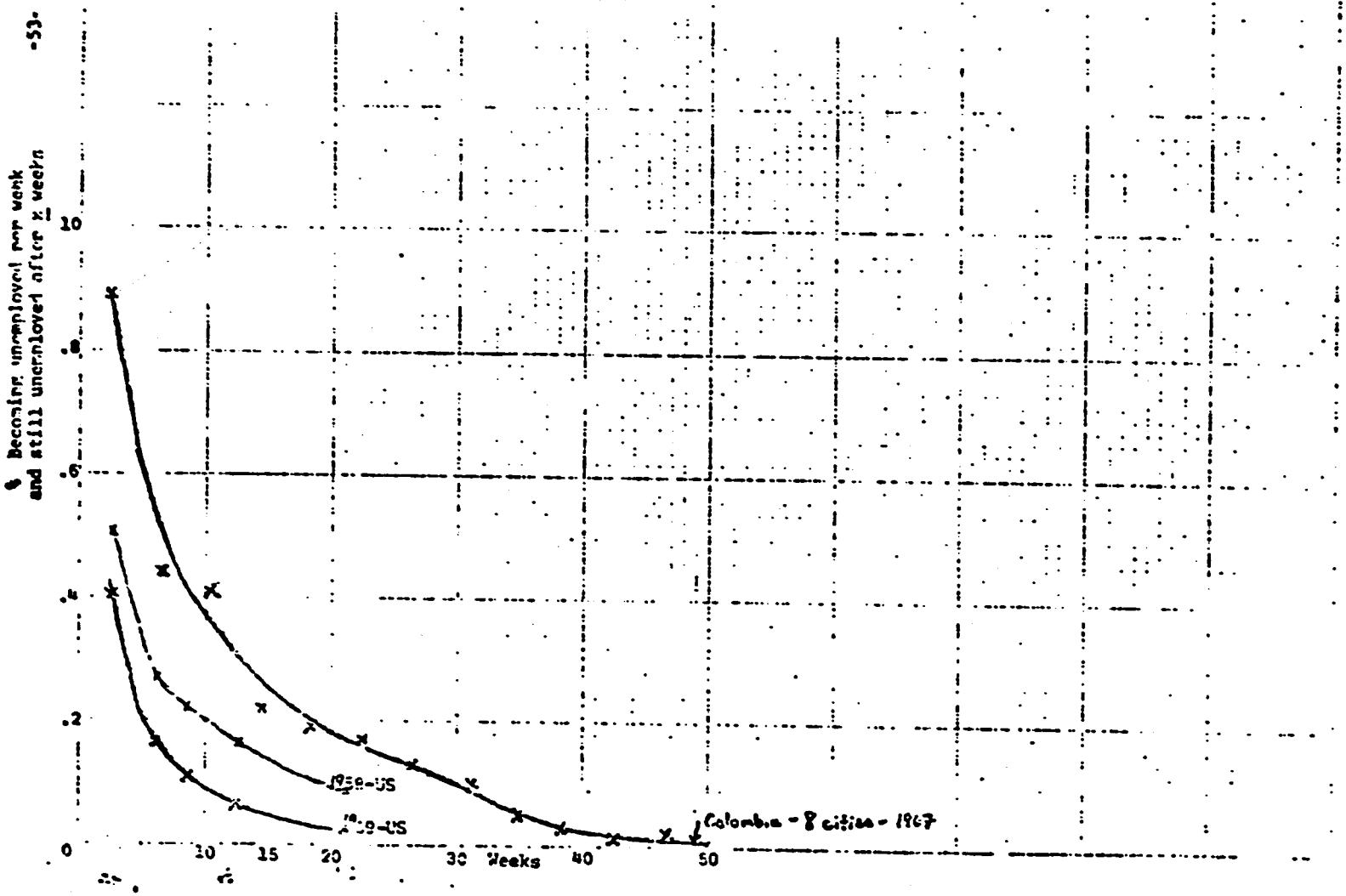
The rate of leaving the unemployed category during the first twenty weeks was much faster in Bogota than in any of the other cities (i.e. the negative slope of its profile greater), reflecting something positive in the functioning of the labor market (See Diagram 2). For longer periods, however, Bogota's rate was the highest of all the cities, this may be associated with the high share of clerical job seekers there plus the relatively high wealth levels. Table 15a shows "x weeks or more" unemployment rates by occupations; of the large categories the rate for clerical job seekers is the highest for all unemployment periods. Table 15c indicates that the "year or more" unemployment rate

Diagram 1

UNEMPLOYED TIME PROFILES -
U.S. and COLOMBIA

(Low Unemployment - U.S. - 1969 - 3.5 % average
High Unemployment - U.S., 1958 - 6.8% average)





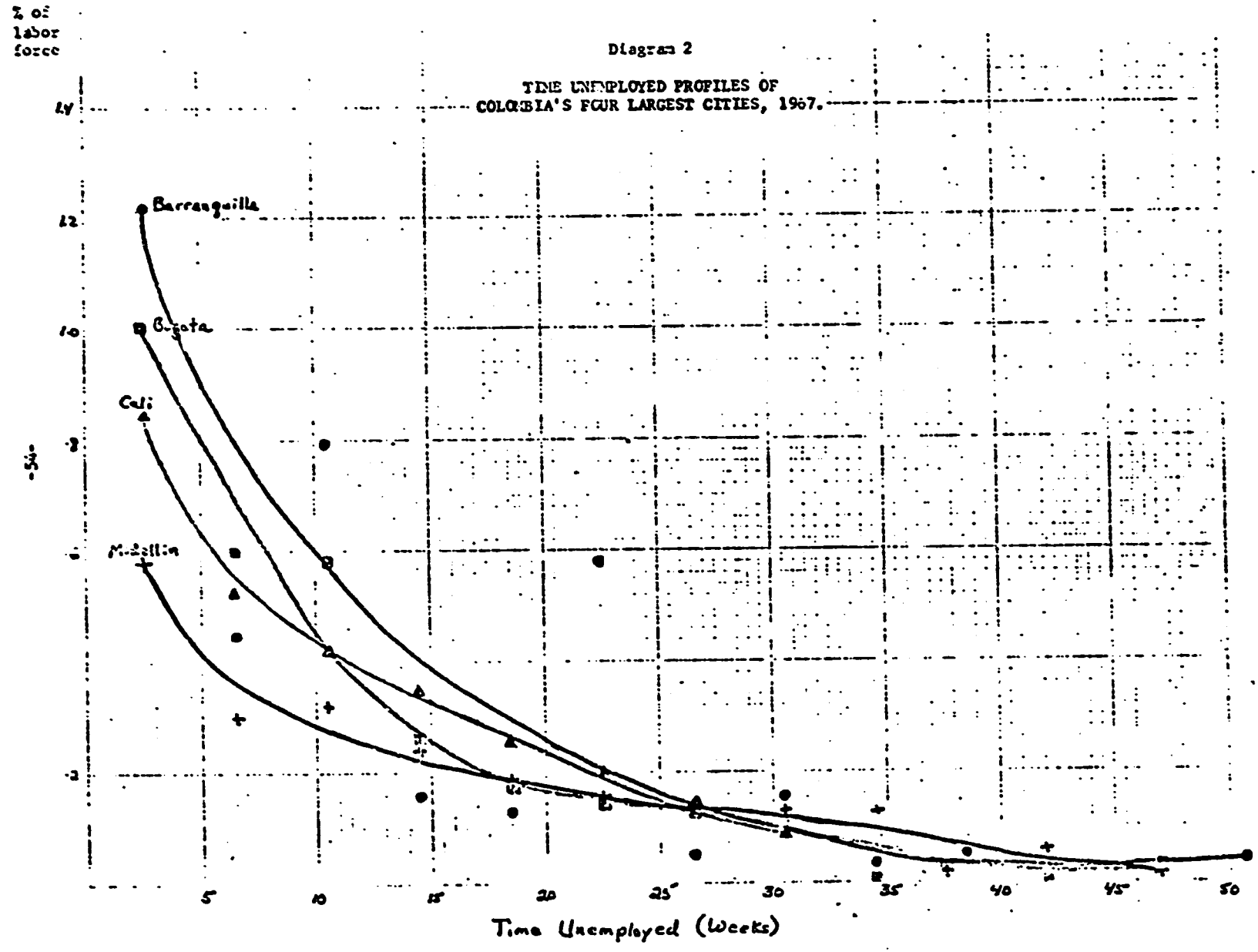


TABLE 15a

SHARE OF THE LABOR FORCE SEEKING EMPLOYMENT IN VARIOUS OCCUPATIONS WHICH IS UNEMPLOYED MORE THAN SPECIFIED NUMBERS OF WEEKS: PREVIOUS JOB HOLDERS AND NEW ASPIRANTS[1]

| Weeks Unemployed | Professional | Executive | Clerical | Sales Staff | Transport Workers | Crafts-men | Laborers | Service Workers |
|---|---|---|---|---|---|---|---|---|
| 0 | 8.38 | 3.17 | 26.38 | 13.96 | 12.78 | 17.02 | 17.44 | 18.14 |
| $\geq 5$ | 6.54 | 2.95 | 19.79 | 10.75 | 9.46 | 12.42 | 14.82 | 13.24 |
| $\geq 13$ | 4.44 | 2.22 | 13.19 | 7.40 | 5.24 | 8.17 | 11.68 | 9.25 |
| $> 52$ | 1.93 | - | 6.86 | 3.63 | 1.79 | 3.91 | 8.02 | 4.90 |

| | Domestic Servants | Others | Total* |
|---|---|---|---|
| 0 | 2.51 | 59.79 | 15.5 |
| $\geq 5$ | 1.43 | 53.21 | 11.47 |
| $\geq 13$ | .83 | 37.67 | 7.75 |
| $\geq 52$ | .48 | 9.57 | 3.88 |

[1]An individual's occupational category is defined by the job sought.

*Total doesn't include miners, rural workers, and defence and police.

TABLE 15b

SHARE OF THE LABOR FORCE SEEKING EMPLOYMENT IN VARIOUS OCCUPATIONS WHICH IS UNEMPLOYED MORE THAN SPECIFIED NUMBERS OF WEEKS: PREVIOUS JOB HOLDERS AND NEW ENTRANTS

| Weeks Unemployed | Professionals | Executives | Clerical | Sales Staff | Transport Workers | Crafts-men | Laborers | Service Workers |
|---|---|---|---|---|---|---|---|---|
| 0 | 4.25 | 3.94 | 13.52 | 7.18 | 11.38 | 13.33 | 10.14 | 12.44 |
| ≥ 5 | 3.32 | 1.97 | 9.46 | 5.31 | 8.42 | 9.46 | 8.21 | 8.71 |
| ≥ 13 | 2.21 | 1.97 | 6.35 | 3.52 | 4.78 | 6.00 | 6.79 | 5.97 |
| > 52 | 1.11 | - | 3.11 | 1.58 | 1.36 | 2.67 | 5.27 | 2.99 |

| | Domestic Servants | Others | Total |
|---|---|---|---|
| 0 | 1.95 | 3.91 | 10.14 |
| ≥ 5 | .98 | 3.25 | 7.20 |
| ≥ 13 | .55 | 2.27 | 4.66 |
| ≥ 52 | .33 | .66 | 2.33 |

TABLE 15c

SHARE OF THE LABOR FORCE SEEKING EMPLOYMENT IN VARIOUS OCCUPATIONS WHICH IS UNEMPLOYED MORE THAN SPECIFIED NUMBERS OF WEEKS: FIRST TIME JOB SEEKERS

| Weeks Unemployed | Professional | Executives | Clerical | Sales Staff | Transport Workers | Crafts-men | Laborers | Service Workers |
|---|---|---|---|---|---|---|---|---|
| 0 | 3.91 | .89 | 12.66 | 6.75 | .58 | .41 | 6.93 | 5.55 |
| ≥ 5 | 3.13 | .89 | 10.25 | 5.33 | .44 | .33 | 6.38 | 4.38 |
| ≥ 13 | 2.15 | - | 6.84 | 3.85 | .22 | .24 | 4.64 | 3.22 |
| > 52 | .78 | - | 3.67 | 2.03 | .15 | .13 | 2.29 | 1.03 |

| | Domestic Servants | Others | Total |
|---|---|---|---|
| 0 | .43 | 22.22 | 5.36 |
| ≥ 5 | .43 | 22.22 | 4.34 |
| ≥ 13 | .29 | 15.78 | 3.00 |
| > 52 | .14 | 3.11 | .16 |

for the first time job seekers is more than twenty times as high for clerical job seekers as for the average. For clerical workers the aspirantes unemployment rate is about equal to the casantes one, for other occupations it is less than one-half (See Table A-9.)

Although it is perhaps dangerous to assume that if a person is not unemployed for more than one or two months the economics of his situation cannot be too drastic. length of time unemployed is obvously a determinant of the overall seriousness of the problem. Of the 2/3 of the unemployed whose economic situation may be worthy of special consideration (i.e. those not aspiring to high income jobs) 1/4 do not have to search for jobs more than five weeks (Table A-3). One might by this reasoning exclude a total of 50% from the 'serious' category. Finally, it could be argued that a reasonable number of the first time job seekers not already excluded on one count or another are not in a particularly difficult situation because they live with their families· this could correspond to an additional 5 to 10% of total unemployment.

To summarize, one might conclude that with an overall urban unemployment rate of 10%, perhaps 3 to 5% of the labor force is unemployed and in bad straights.[1]

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[1]It has not been our main concern here to analyse the unemployment producing mechanics for the low skilled-low aspiration unemployed person--who undoubtedly does exist. Possibly the frequently proposed interpretations of unemployment (relating it to various forms of marginalism, etc.) are valid for this group. Given the possible seriousness of this group's situation it does warrant attention despite its reduced numerical proportions.

This group is much smaller than the one which is employed and in bad economic straights.[1] In short, unemployment may as frequently be an indication of the price people are willing to pay to avoid undesired jobs as it is a direct measure of a generalized difficulty to become employed which creates an economically problematic situation.

Perhaps the most serious implications of unemployment are not the sufferings of the unemployed--there seems reasonable evidence that before a crisis is reached people become employed one way or another--but rather the direct social cost in terms of frustration, incentive to crime, and general alienation toward an economic system which must appear highly uninterested in them. Studies of these phenomena have not to my knowledge, been undertaken, but they would be an important complement to the statistical information now available.

All of the above is not to say that open unemployment might not become a tremendous problem in Colombia within 10 or 15 years; but it would be misplaced emphasis to argue that it is a major direct cause of poverty at present.[2]

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[1] We do not imply, of course, that the unemployed person of higher skill, wealth, etc. does not suffer; his psychological problem may well be more severe than that of the low income unemployed, but this sociological or cultural problem is not our immediate concern here.

[2] It may, however, bt useful from a political point of view for Colombian decision makers to focus on this issue because of its tangibility and the general acceptance of the idea that there is something unfair about unemployment--a feeling which is not so prevalent with respect to low income levels in a country like Colombia. Since the policies which are likely to resolve the unemployment problem in the long run (policies making it more advantageous for firms to use more labor and less capital, and so on) are likely to improve income distribution and probably to raise the rate of economic growth, it may well be a happy chance if unemployment is defined as one of the country's major problems, even if it is not.

## Direct Evidence on Frictional Factors and the Voluntary Aspect of Unemployment

Much of the evidence points to the fact that most urban unemployment in Colombia has an important frictional component--that is, the person has had or could get some jobs but is unwilling to accept them, preferring to remain unemployed.

What little Colombian evidence has been adduced to date on how unemployment is generated is consistent with this conclusion, suggesting that most people who leave their jobs do so by their own choice, rather than having lost the job through the action of their employer.[1] Most job leavers in a Bogota study did so for economic reasons;[2] the rate of turnover in relatively good jobs such

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[1] A Baranquilla study found that about two-fifths of the unemployed men and one-tenth of the women lost their jobs through action originating primarily on the side of the employer. If this result were general for the country, one might conclude that the unemployment problem has less to do with losing one's job, than with getting it in he first place. It is not clear, when there is standardization for age and occupation, whether first time job seekers or previously employed locate jobs more quickly.

[2] See Rafael Prieto D., Causas del Desempleo y Movilidad de la Fuerza de Trabajo de Bogota," in Empleo y Desempleo en Colombia, op. cit. Prieto made a detailed study of 60 people who had been unemployed in Bogota. The group had had 129 departures from work, of which 73 were for economic reasons and of these 26 were involuntary. The main reason was too low a salary or some other similar sounding explanation. Economic motives (voluntary and involuntary) dominated much more in the case of men: voluntary economic withdrawal accounted both for about half of the withdrawals and involuntary economic for another quarter. Economic motives only accounted for one-half of the withdrawals of women, such things as family, marriage, and so on being relatively much more important.

It is interesting to note that a higher share of first withdrawals from work were voluntary and due to economic motives (one-half) than for subsequent withdrawals (about one-quarter).

as those in modern manufacturing is low.[1]

The clash of desires and possibilities hypothesized earlier is probably reflected to some extent in the differences between the distribution of the unemployed by the sector of occupation of previous employment (for those who have worked before) and the occupations now sought by the same group; this difference presumably reflects in part the mobility aspirations of the individuals, and in part the reality of the market place. It is not clear how singleminded a worker is in the choice of the sector or occupation in which he wishes to operate, and whether in the samples he reflects his first preference or his natural expectation. First time job seekers will naturally have a different distribution by occupation and sector related to the fact that their

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Footnote from previous page (continued)

Note also that the share of people who leave their jobs voluntarily is higher in Colombia than for example in the U.S., at least if Prieto's data is representative. There, average figures for 1967 and 1968 indicate that 72.3 percent of the people who left their jobs had lost them. (President's Manpower Report, op. cit., p. 235). It must be remembered however, that 1/3 of the job losers (at least in 1968) were laid-off rather than discharged. (See Hoyle, op. cit.) This phenomenon is not a common one in large scale plants in Colombia although it undoubtedly occurs in smaller establishments.

[1] See Miguel Urrutia, Historia del Sindicalismo en Colombia Boreta, Ediciones Universidad de Los Andes, 1969, p. 272.

education is higher, their ambitions are probably high and uneroded, and they are younger, therefore, ruling them out of certain fields and into others. The ILO in its study concluded that aspirations tend to be whittled down over time by failure to get desired jobs.[1] Data to test this hypothesis are not available.

In terms of the occupational categories used in the CEDE survey, the lowest income group (in the employed population) includes the lower quartile of all groups except professionals, executives, and office workers (this amounts to 19.1% of the employed population) and then, roughly speaking, perhaps the second quartile of domestic workers and most of the second quartile of craftsmen and laborers (for about another 10%). Unemployment rates classified by previous occupation (that is, percentage of people who previously worked in these categories over the employed labor force) are unavailable, but it appears that the unemployment rate is high for the category "craftsmen" which forms 1/3 of the labor force,

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[1] In most cases, the occupations sought by new entrants to the labour market are of higher status and higher expected earnings than those sought by those previously employed. Part of this is explained by the high level of education of the new entrants, noted earlier. But part must also reflect a gradual downgrading of ambitions and expectations, as people grow older and have more experience of the labour market. A significant number of those who were formerly employed in professional and executive positions lower their sights and seek office jobs; many of those who had office jobs try for sales posts; and a fair proportion of those who were salesmen and transport workers seek jobs as artisans or service workers.

Some of this shift in job preferences is probably associated with the length of time people are unemployed. In most cities a quarter to a third of those unemployed have been without jobs for a year or more, one half of two thirds for more than three months.
(ILO, op. cit., p. 359)

and in which 40% of the previous job holder unemployed are looking for work. By sectors, unemployment rates are strikingly high in construction and low in domestic service. The ratios do not quite indicate the tendency of the sector to expell a person and not reemploy him, since he may be searching occupation elsewhere. (ILO, p. 366)

Slighton notes that for the short run the little evidence there is in the manufacturing sector is consistent with U.S. experience--a tendency for rates of growth of labor productivity and output to be positively related. (page 47) But which of the many causal mechanisms which could generate this relationship are actually at work is not at all clear.

Note that for the period 1951-64 there is a strong negative by sector relationship between increase in labor used and percent increase in output per worker. In commerce, where labor rose the fastest output per person rose the slowest (actually fell) and where labor rose the slowest public utilities, output per person rose the fastest (apart from mining.)

Participation Rates

Changes in (age specific) participation rates over time are consistent with the combination of increasing difficulty for people in finding the job they want and sufficient financial background to remain outside the labor force. There appears to have been a decline in age specific participation rates between 1951 and 1964, and possibly a further decline since then in certain age categories; the declines have been concentrated in the

younger age groups for both men and women; for older people there is little change for men and an increase for women. (Note, however, that participation rates for women are stilllow by world or Latin American standards in Colombia). The ratio "total labor force/population aged 15-64 fell from 61.5% in 1951 to 53.6% in 1964 and rose again to 55.7 by 1970, while the ratio labor force aged 15-64/population aged 15-64" fell from 56.8 to 49.5% between 1951 and 1964, and rose back to 52.0 in 1970.

In the rural areas there was not much change over 1951-64 --some decrease in participation of older and younger men and of all women--the latter being a decrease of two or three percent, possibly associated with the decrease in importance of rural artisanry.

Participation rates are lower for women in the rural areas although there is a definitional problem here--women who put in a good deal of work on their husband's farm are probably usually excluded.[1] Presumably the lack of suitable paid work for women in the country is one major difference; much of the work in the service sector in the city is carried out by women. In fact, the majority of women in the urban labor force are usually found in the service sector. In industrialized countries, too, a relatively high female participation has been achieved as the service sector has increased in importance.

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[1] Whereas theoretically they should be in the family helper" category of the employed.

In urban areas, where data are both better and easier to interpret, age specific rates for men dropped dramatically in the 15-19 age group and less so in the 20-24 age group during 1951-64 and during 1964-70 (see Table 16). Some but not all of the decrease in age specific participation rates for young males was due to the increased schooling opportunities. For the period 1951-1964, 16.5 points of the total decline of 24 for the group 15-19 can be accounted for in that way and 4.3 of the 8.3 points for the group 20.24.[1] Among men over 55, the rates also fell substantially, and apparently continuously. The decreases for people 65 and over are presumably in part a reflection of improvements in the standard of living (though possibly also of forced retirements) and are quite substantial, reaching 13% for the age group 70-74.[2] But the decrease for the age group 55-64 may well be in part or even largely due to increased difficulties in the job market. This is suggested by the fact that this rate is now lower in Colombia than in the U.S. the "need" to continue working is presumably higher in Colombia. Another factor may be physical condition: by the time they reach this age many Colombians have unsatisfactory health. These Colombian rates, when contrasted with U.S. ones, suggest difficulties of entering the labor force for the

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[1]Note, however, that the decrease in participation rates was probably overstated due to the failure of the 1964 census to pick up first time job seekers as members of the labor force. See page 67, footnote 2.

[2]Roberto Jungito, Alvaro Lopez, Alvaro Reyes and Diego Salazar, Analysis de la Estructura y Evolucion de la Fuerza de Trabajo Colombiana: 1938, 1951, and 1964 y Proyecciones de la Poblacion Economicamente Activa, 1964-1965, CEDE, Universidad de Los Andes, Bogota, 1970, p. 21.

TABLE 16

URBAN (MUNICIPAL SEAT) LABOR FORCE PARTICIPATION
BY AGE AND SEX

(percent)

| Age | Cabeceras | | |
|---|---|---|---|
| | Total | Male | Female |
| 1961 | | | |
| 10-14 | 11.2 | 12.8 | 9.8 |
| 15-19 | 50.2 | 71.6 | 34.8 |
| 20-24 | 60.1 | 91.8 | 34.9 |
| 25-34 | 58.6 | 96.6 | 27.7 |
| 35-44 | 57.6 | 97.2 | 25.1 |
| 45-54 | 54.5 | 95.0 | 21.1 |
| 55-64 | 47.0 | 88.5 | 16.3 |
| 65+ | 29.4 | 63.2 | 9.6 |
| 15-64 | | | |
| 1964 | | | |
| 10-14 | 6.1 | 6.4 | 5.6 |
| 15-19 | 37.0* | 47.6* | 28.9* |
| 20-24 | 57.0* | 83.5* | 36.2* |
| 25-34 | 58.3 | 94.7 | 27.9 |
| 35-44 | 58.4 | 96.5 | 25.7 |
| 45-54 | 55.4 | 94.3 | 22.5 |
| 55-64 | 46.6 | 84.6 | 16.3 |
| 65+ | 24.8 | 48.7 | 8.4 |
| 15-64 | | | |
| 1970 | | | |
| 12-19 | 22.8 | 25.9 | 20.3 |
| 15-19(estimated) | 33.3 | 40.5 | 28.0 |
| 20-24 | 58.7 | 76.9 | 44.8 |
| 25-34 | 64.9 | 95.9 | 39.3 |
| 35-44 | 64.4 | 96.5 | 35.2 |
| 45-54 | 60.6 | 93.9 | 30.2 |
| 55-64 | 47.7 | 77.2 | 20.3 |
| 65+ | 22.1 | 42.7 | 8.3 |

*It seems probable that these figures are downward biased in absolute terms.

(continued on next page)

with respect to those of 1970, and probably also those of 1951. The failure to include 'aspirantes' in any appreciable numbers is one source of the bias; in 1970 2.7% of the age group 12-19 would fall in this category (i.e. say 12% of the labor force).

A second and possibly related incomparability (see text for a discussion) between the 1951 and 1964 censuses also tends to make it difficult to draw firm conclusions, especially for age groups where the indicated participation rates are only slightly different in the two years. There was a higher share of individuals about whom incomplete information was gathered in 1951 than in 1964, and there is a possibility that some were classified as being in the active labor force in 1951 when in 1964 they would have been classified in "other conditions of inactivity." (For a discussion of this point see Jungito et al., op. cit., p. 18.)

Since the possible range of difference made by people with either incomplete information recorded or listed under "other conditions of inactivity" seems to be 5 or 6%, this could account for most but not quite all of the difference in global average participation rates. That different treatment of "other conditions" may be related to the decrease in age specific participation rates for the younger age cohorts is consistent with the fact that the category refers primarily to younger people, especially in rural areas, but also in urban zones. (See DANE, XIII Censo Nacional de Poblacion, Julio 15, 1964, Resumen General, pp. 144-145). Meanwhile, in 1951 the much smaller category of "other conditions" was not heavily concentrated on the younger age groups. If this asymmetry of treatment existed, as between the two censuses, it seems probable that the 1964 census was more accurate in describing people as not in the labor force and that the participation rates for these age groups of 1951 were therefore overestimated relative to the reality. There is a possibility that this factor, coupled with changes in inactivity due to education in 1964, earlier retirements through preference, and greater understatement of aspirantes in 1951 than in 1964, explain all of the observed decrease between these two years due to difficulty of finding a job, this seems unlikely, however.

Sources and Methodology: For 1951 and 1964, Robert Slighton, Urban Unemployment...., op. cit., p. 51; coming originally from DANE, Censo de Poblacion de Colombia 1951, Resumen, and unpublished 1964 census data. For 1970, calculations based on DANE, Encuesta de Hogares. The male and female rates were presented in DANE, Boletin Mensual de Estadistica #238 pp. 76-7. The totals were deduced from the sex specific rates and the economically active population figures of DANE's Encuesta tabulados. For the category 15-19, which DANE did not present separately, it was assumed that the participation rate fell by a little less than for the category 12-19 (for which it was possible to calculate the participation rates in both years). The 12-19 participation rates of 1964 were: men 31.44, women 21.24 and total 25.95. (We assumed that all the employed persons in the age range 10-14 were 12 or more, as the census defined people as employed only if they were 12 or more years of age).

age groups 15-24 and 55-64 for men.[1] (See Table 17) Comparisons are more difficult to make for women since the assumption of similar preferences to work is probably less valid. Around 1950, the Colombian participation rates for males 15-19 were above those in the U.S., and for males 55-64 they were roughly equal. By about 1970, these Colombian rates were well below the U.S. ones, (See Table 17). For women during 1951-64 rates decreased for girls under 20 but rose for most other age groups, usually by one or two percent. During 1964-70 more dramatic increases occurred, so that for the age groups 20-54 a consistent increase in the participation rate of 8-10% occurred.[2,3]

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[1]The male participation rates in the age group 20-24 decreased from 91.? to 83.5 and that for the group 15-19 from 71.6 to 47.6.

[2]Part of the increase is associated with higher female participation rates in the relatively large cities. Table A-13 presents data on age specific rates for selected cities.

[3]This increase is so dramatic as to warrent scrutiny as to whether differences between the two methodologies (1964 census and 1970 sample) would tend to introduce an upwared bias in 1970 relative to 1964. As noted earlier, the formally stated methodologies would appear to lead to quite similar figures; the main uncertainty revolves around what was actually done in the 1964 census. It seems highly probable that the "aspirantes" category was severly underestimated; this presumably implies an underestimate of the participation rate in 1964. Age specific "aspirante" rates are not available in the 1964, census, but the overall rate was only 0.?6, so given the relative youth of the urban female labor force in general (about 60% less than 30 years of age and 45% less than 25 years) this reported rate could hardly have reached one p cent for any age group. In 1970(DANE, Boletin Mensual #238, p. 62), it ranged from about 4.4% to 11.6% in the three youngest categories, and probably averaged 8-10% for the group 15-30. Given the participation rates for women in these categories in 1970 this corresponds to close to four percent of the 20-24 population and 1-2% of the 12-19 and 25-29 groups. Presumably correctly measured rates would have been lower in 1964, but it seems possible that up to 1-2 points of the increase could have been illusory, more than that would be unlikely. Hence this incomparability could not significantly alter the general conclusion reached.

Table 17

Colombian Urban and U.S. Total Participation Rates, Compared, Selected Years[1]

| | Male | | | | | Female | | | | | Colombia | | U.S. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Colombia | | U.S. | | (Non-white) | Colombia | | U.S. | | (Non-white) | | | | |
| | 1951 | 1970 | 1947 | 1969 | 1969 | 1951 | 1970 | 1947 | 1969 | 1969 | 1951 | 1970 | 1947 | 1969 |
| 15-19 | 71.6 | 40.5 | 66.6* | 58.3* | 48.6+ | 34.8 | 28.0 | 41.1* | 43.3* | 34.6+ | 50.3 | 33.3 | 46.3 | 67.97 |
| 20-24 | 91.8 | 76.9 | 84.9 | 86.6 | 84.4 | 36.9 | 44.8 | 44.9 | 56.8 | 58.6 | 60.1 | 58.7 | 64.8 | 80.64 |
| 25-34 | 96.6 | 95.9 | 95.8 | 96.9 | 94.4 | 27.7 | 39.3 | 32.0 | 43.8 | 57.8 | 58.6 | 64.9 | 63.0 | 70.08 |
| 35-44 | 97.2 | 96.5 | 98.0 | 97.0 | 92.7 | 25.1 | 35.2 | 36.3 | 49.9 | 59.5 | 57.6 | 64.4 | 66.4 | 72.89 |
| 45-54 | 95.0 | 93.9 | 95.5 | 94.6 | 89.5 | 21.1 | 30.2 | 32.7 | 53.8 | 60.8 | 54.5 | 60.6 | 63.9 | 73.45 |
| 55-64 | 88.5 | 77.2 | 89.6 | 83.4 | 77.9 | 16.3 | 20.3 | 24.3 | 43.1 | 47.5 | 47.0 | 47.7 | 64.3 | 62.14 |
| 65+ | 63.2 | 42.7 | 47.8 | 27.2 | 26.1 | 9.6 | 8.3 | 8.1 | 9.9 | 11.9 | 29.4 | 22.1 | 24.0 | 17.30 |

*10-19 years. The rate for the age group 15-19 would be somewhat lower.

+Approximate figures.

[1]Since almost all of the U.S. labor force would correspond to the Colombian definition of urban (centers of 1,500 and up), this would seem to be the appropriate comparison. Rural participation rates in Colombia are, of course, higher than urban ones.

Sources: Table 14; U.S. President's Manpower Reports, op. cit., pp. 216-217.

When total (male and female together) participation rates are considered, an increase is seen to have occurred over 1951-1970 for the age groups between 25 and 65 (only the youngest two categories witnessed decreases. When one focuses on changes in the degree of utilization of the human resources available, these total rates are the most relevant ones it is probably true that perceived difficulties in aquiring the desired job have risen for a number of groups but at the same time the degree of human resource utilization has risen.[1]

What part of the decreases in participation rates which characterized certain age categories (especially young urban males) is a result of greater difficulty as in finding acceptable jobs.[2,3]

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[1]The overall participation rate for people 17-65 has risen since 1964. And since most of the decrease for the younger categories is associated with extended education, it cannot be treated as representing misuse of resources--rather the contrary. If one measures the joint "participation or education" rates for the three years, the figures are 59.4, 55.1 and 62.1 respectively.

[2]A relevant comparison in trying to gauge the effect of obstacles to job acquisition coupled with the feasibility of non participation is that between blacks and whites in the U.S. From the age group 20-24 through the group 55-64 participation rates tend to be higher for white than black males; this gap appears to have been widening for the age groups 25-64; (recently the black participation rate in the age group 20-24 has been above the white one but this is presumably due to increasing university education on the part of the whites). At the start of the period the typical differential within the 25-64 age groups was about 1 percent, in 1969 it was as high as 6 percent for some age groups. Meanwhile participation rates for females show entirely different patterns; for the age group 16-19 whites have substantially higher rates, for 20-24 there is not a great deal of difference though blacks have slightly higher rates and for all of the older age groups blacks have substantially higher rates. These differentials have fallen in some cases over the years, however black female participation rates in the age group 25-64 have risen, according to the age group, from 6 to 10 percent between 1948 and 1969, whereas participation rates for white females have risen between 10 to 20 percent (group 45-54) in this period.

(footnote continued on page 71)

One factor in judging whether job acquisition became more difficult or not over the period in question is the status of the persons not in the labor force. Table 19 presents a categorization of the non-participants in each age group. As noted earlier, not all of the P.R. decreases for males 15-19 and 20-24 were accounted for by increases in people stating that their "condition of inactivity" was 'student." The remaining part of the increase in non participation rates was picked up by the not very helpful category 'other conditions." How this category should be interpreted is open to question, one plausible hypothesis is that an important component of it corresponds to first time job seekers. If, as seems probable, they were to account for about one-half of all unemployment in the 15-24 age range, they would explain almost all of the difference between the decrease in participation rate and the increase on the "student rate." The high "aspirants" rate reflects directly job seeking difficulties; but under this explanation the decrease in the P.R. is not an additional symptom.

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(footnote 2 and 3 continued)

Over the period 1957-69, of the total unemployed pool 36 to 41 percent had lost their last job, 14 to 15.5 percent had left it, 31 to 34 percent were reentering the labor force and the remainder, 13-15 percent, had never worked before. These percent distributions were not significantly different as between whites and negroes. For the quite significant group of males 20 years and over, 55 to 60 percent were unemployed because of having lost their last job whereas around 17 percent had left their last job, a very few had never worked before, and the remainder were reentering.

[3]There is presumably a "natural" rate of change in labor force participation, a function of the rate of rural-urban migration, the increased capacity of school systems, the rate of change of formal education prerequisites for employment, the rate of growth of unemployment, the rate of growth of income per capita, as well perhaps as rate of change in the social family structure.

TABLE 18a

STATUS OF NON-PARTICIPANTS IN THE URBAN MALE AND FEMALE LABOR FORCE WITH RESPECT TO THE TOTAL POPULATION

1951

| Age, Sex | At Home | Study | Minor | Aged and Invalid | Institutionalized | Other |
|---|---|---|---|---|---|---|
| 10-14 Total | 4.47 | 57.55 | 2[illegible].02 | 0.19 | 0.39 | 0.11 |
| Male | - | 59.62 | 26.73 | 0.25 | 0.31 | 0.11 |
| Female | 8.56 | 55.65 | 25.38 | 0.13 | 0.46 | 0.09 |
| 15-19 Total | 27.97 | 20.52 | | 0.44 | 0.27 | 0.05 |
| Male | - | 26.63 | | 0.69 | 0.10 | 0.77 |
| Female | 48.05 | 16.13 | | 0.26 | 0.40 | 0.38 |
| 20-24 Total | 34.76 | 3.64 | | 0.43 | 0.16 | 0.91 |
| Male | - | 6.24 | | 0.59 | 0.09 | 1.68 |
| Female | 62.66 | 1.55 | | 0.23 | 0.21 | 0.65 |
| 25-34 Total | 39.01 | 0.65 | | 0.56 | 0.17 | 1.01 |
| Male | - | 0.82 | | 0.97 | 0.11 | 1.78 |
| Female | 71.12 | 0.34 | | 0.39 | 0.22 | 0.37 |
| 35-44 Total | 40.02 | 0.10 | | 0.89 | 0.21 | 1.03 |
| Male | - | 0.05 | | 1.26 | 0.14 | 1.62 |
| Female | 73.22 | 0.13 | | 0.59 | 0.27 | 0.58 |
| 45-54 Total | 41.67 | | | 1.71 | 0.36 | 1.60 |
| Male | - | | | 2.22 | 0.24 | 2.25 |
| Female | 76.04 | | | 0.13 | 0.46 | 0.11 |
| 55-64 Total | 43.78 | | | 5.66 | 0.63 | 2.60 |
| Male | - | | | 1.84 | 0.44 | 4.01 |
| Female | 76.53 | | | 4.77 | 0.76 | 0.15 |
| 65-up Total | 38.83 | | | 26.24 | 1.55 | 3.82 |
| Male | - | | | 29.31 | 1.31 | 6.59 |
| Female | 62.47 | | | 0.24 | 0.16 | 0.21 |

Source: DANE, Censo de Poblacion de Colombia, 1951, Resumen, op. cit.

TABLE 18b

1964

| Age, Sex | At Home | Study | Minor | Old | Institutionalized or Invalid | Pensioned or Rentier | Other |
|---|---|---|---|---|---|---|---|
| 10-14 Total | 6.45 | 73.36 | 9.49 | | 0.16 | | 4.61 |
| Male | 9.38 | 76.16 | 9.45 | | 0.20 | | 7.98 |
| Female | 12.51 | 70.74 | 9.52 | | 0.13 | | 1.46 |
| 15-19 Total | 21.99 | 36.51 | | | 0.39 | 0.03 | 4.07 |
| Male | - | 43.14 | | | 0.59 | 0.03 | 8.50 |
| Female | 38.63 | 31.49 | | | 0.26 | 0.02 | 0.73 |
| 20-24 Total | 33.04 | 6.68 | | | 0.47 | 0.07 | 2.74 |
| Male | - | 10.56 | | | 0.70 | 0.10 | 5.33 |
| Female | 59.16 | 3.62 | | | 0.29 | 0.05 | 0.68 |
| 25-34 Total | 38.29 | 0.95 | | | 0.50 | 0.18 | 1.73 |
| Male | - | 1.22 | | | 0.67 | 0.23 | 3.10 |
| Female | 70.33 | 0.74 | | | 0.35 | 0.14 | 0.58 |
| 35-44 Total | 39.22 | 0.01 | | | 0.72 | 0.45 | 1.27 |
| Male | - | | | | 0.94 | 0.54 | 2.00 |
| Female | 72.72 | 0.01 | | | 0.52 | 0.37 | 0.64 |
| 45-54 Total | 40.42 | 0.004 | | | 1.39 | 1.32 | 1.43 |
| Male | - | | | | 1.91 | 1.64 | 2.16 |
| Female | 74.64 | 0.01 | | | 0.95 | 1.05 | 0.81 |
| 55-64 Total | 42.48 | 0.01 | | 1.90 | 2.86 | 3.47 | 2.03 |
| Male | - | | | 1.47 | 4.25 | 5.40 | 4.36 |
| Female | 76.38 | 0.02 | | 2.24 | 1.75 | 1.93 | 1.23 |
| 65-up Total | 20.12 | 0.03 | | 44.56 | 4.30 | 4.65 | 1.70 |
| Male | - | 0.3 | | 35.95 | 5.98 | 7.94 | 1.58 |
| Female | 48.99 | 0.06 | | 72.70 | 4.51 | 3.41 | 2.55 |

Source: DANE. XII Censo de Nacional de Poblacion Julio 15, 1964 Resumen General, op. cit.

TABLE 18c

RATES OF NON-PARTICIPATION IN THE URBAN MALE LABOR FORCE: 1970

| Age, Sex | Participation Rate | Non-Participation Rate | At Home | Student | Incapacitated | Other |
|---|---|---|---|---|---|---|
| 12-19 | 25.9 | 74.1 | --- | 65.4 | 1.1 | 7.6 |
| 20-24 | 76.9 | 23.1 | --- | 18.6 | 2.0 | 2.5 |
| Estimated: | | | | | | |
| 12-19 for 1964 | 31.44 | 68.56 | --- | 55.81 | 0.44 | 8.31[a] |

[a]This number would be higher if in fact the "other" category in 1964 had as an important component first-time job seekers; the method of calculation used here did not take this possibility into account. The figure could be as high as 9.5 or 10.0.

Source: DANE, Boletin Mensual de Estadistica, #238, p. 69.

The "other" category became equally important in 1964 for the age group 10-14 as for the group 15-19, which confuses somewhat its interpretation. there are significant numbers of aspirants at this age but not enough to explain the full increase in 'other'. In any case, it is not obvious that the category in some way reflects an increased difficulty in job acquisition. The 'other' category remained insignificant for girls, possibly because 'household" is the obvious response as to why a girl is not in the labor force. Whatever the source of this phenomenon the further decrease in male P.R.s for the 15-19 and 20-24 age groups between 1964 and 1970 were fully matched by increases in the "student" category. It is interesting that the substantial decrease in participation for men over 55 (a 4 percent decrease for the age group 55-64 and a 15 percent decrease for the group 65 and over) in the urban areas is a conglomerate result of defining more people as invalids, an increasing ratio of people who live off wealth, and a positive change in the 'other contitions' category. Possibly jobs were harder to get for older people at this time.

It is an interesting question the extent to which the decreasing participation rates and high unemployment rates for males of certain age groups (15-24 and 55-64 in particular) have been associated with the increase in female participation rates. Table 16 suggests that the female participation rates rose only marginally during 1951-64 but sharply during 1964-1970, while the male rates in the affected ages fell faster in the former

period for the younger group--and at similar rates for the older group: this would suggest a lack of relationship. In general it may be assumed that a large part of the female labor force is non-competitive with men thus even a rapid rise in the female participation rate might not impinge directly on too high a share of the male labor force. More detailed research will be required to throw some light on this question.

Hints as to the factors determining PR's may be provided by the nature of their short run fluctuations; some tentative information is available along these lines. Urrutia's observations from a study in Bogota provide a useful background. He found that fluctuations in participation rates (like the rates themselves) differed substantially by age and sex.

The rates continuously approached 100% for men between 30 and 50, the lowest participation rate found for any trimester between March 1963 and March 1966 was about 96%; usually the average was 98% or higher. Participation was also quite high for the 25 to 29 age group with the average being around 94%; during one trimester it dropped below 90%. The rate was much lower usually below 80%, in the 20 to 24 age group, and below 50% in the 15 to 19 age group. Fluctuation was, as expected, more marked in these two low age groups: the range was 74% to 86% for the 20 to 24 age group and 39

to 52% for the 15 to 19 group. For the 55-9 age group the participation rate fell below 80% in some trimesters and fluctuated rather widely between 78 and 95%. Unfortunately the smaller sample size for the categories including the youngest (i.e. 15-19) and the oldest workers would itself explain a part of the greater fluctuations, i.e. the standard error of estimate is greater for these categories. But the sample sizes are not so different as to suggest this as the major factor in the observed differences. Female participation fluctuates more than that of men for all age groups except the youngest two categories. Urrutia explains the fluctuations in the younger age females as a result of the fact that the girls do not have family responsibilities and can work in their own homes. When there is high supply of labor, entrepreneurs prefer men to women.

Experience from other Countries is useful in interpreting the overall participation rates of Colombia and in suggesting hypotheses as to their relationship with unemployment rates and other variables.

In a number of countries relationships have been observed between the rate of open unemployment and the participation rate: as seems plausible, for some subsets of the population a high unemployment rate tends to go with a low participation rate, presumably through a disincentive effect, for other subsets the opposite relationship holds, presumably because the high unemployment rate increases the incentive effect.

In the U.S, for example, Dernberg and Strand claimed to find that a fall in employment as the economy begins a downward cycle is intially accompanied by a fall in the participation rate but later an increase occurs as secondary workers begin to enter the labor force. (Presumably some of these find jobs and some do not, but at any rate they enter the labor force).[2]

Clarence Long, in a study of five countries,[1] found that the participation rate was inversely related to overtime changes in average income per adult male, while that of single and separated women had no noticeable relation to changes in women's salaries; for mothers with or without children the participation rate was negatively related to husband's income. Long concluded overall that no strong relationship between income levels and participation rates could be expected. For the United States (and with respect to the period 1940-50) he found that, regardless of age, locality or race, female participation increased slowly for women who did not have more than secondary school, but very rapidly for those who had attained the university level. The impact of education on male participation was quite different, with the achievement of a primary education being the key factor and further levels relatively unimportant. The decision as to whether a women will enter the

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[1]Clarence Long, The Labor Force Under Changing Income and Employment, New York: Princeton University Press, 1958, p. 29.

[2]Thomas Dernberg and K. Strand, "Hidden Unemployment 1953-62; A Quantitative Analysis by Age and Sex. The American Economic Review, LVI, No. 1, March 1966.

abor force is, of course, much less a foregone conclusion and depends much more on the quality of the job she can get. Male participation fell substantially for the older people (over 55) if they did not have a university education.

Theory contributes little to the discussion since the "income" and "price" effects--so to speak--go in opposite directions, the income effect tending to cause a negative correlation, and something parallel to a price effect (the generally greater difficulty in finding a job when the unemployment rate is high) tending to create a positive correlation. But intra-group relationships (i.e. relation of one person's participation with another's income) and the two way causation involved in cycles (high income and high participation may be joint effects of other factors) complicate the situation and make any number of relationships theoretically consistent.

The literature on the participation rate-unemployment relationship refers most frequently to the "discouraged worker" hypothesis, whereby high unemployment rates would be expected to dissuade workers, and to the "secondary worker" hypothesis, whereby unemployment, say for the family head, increases the need for other family members to earn income, so their participation rates rise. The discouraged worker hypothesis presumably applies most readily for those groups for whom earning income is not an absolute necessity, perhaps especially the young looking for their first job, older people who are on the verge of retirement, members of a family whose head is working, and so on. The secondary worker hypothesis is usually phrased primarily in terms of the wife and children of an unemployed family head. The discouraged worker hypothesis implies a negative relationship between unemployment rates and participation rates, for the group concerned; the secondary worker hypothesis implies a positive one between the unemployment

rate of family heads and the participation rate of this secondary group--it would normally be expected to work toward a positive relation between the two overall rates. taking into account the two hypotheses, the overall relationship is therefore unpredictable, and the verification of the two subhypotheses requires consideration of different groups--different usually by age, sex, and marital status. Within the basic family income earning groups (especially males between ages 25-55) probably not much relationship between the unemployment rate and the participation rate could be predicted, but the most logical prediction would seem to be a negative one.

Statistical analysis of these relationships in Colombia are complicated by a fairly clearcut negative trend in the participation rate of males (associated with increasing school attendance) and a positive trend for females, the short time period and uncertain quality of the data, and the fact that it is usually not presented on as disaggregated a basis as would be convenient for testing the specific hypotheses in question. The unemployment rate tended to bear quadratic relation to time moving up towards the middle of the period and then moving down.

The data do suggest that there are relationships between participation rates and unemployment rates, though the causal mechanisms are not clear. Most of the statistical analyses have been based on the data for Bogota, which now covers a period March 1963 to June 1970. (See Table 20.)

Linear relations between the participation rate and unemployment over the period naturally do not explain much, given the quadratic behavior of unemployment and the lack of trend in the participation rate.

simple linear regression fo the participation rate on unemployment and time

trend indicates a slight negative relationship (with unemployment the independent variable) for both total and males only.[3] (See Table A-18, equations 1 and 14.) Since these equations had little explanatory power, and the residuals were distinctly auto correlated, the negative relationship cannot be taken as meaningful. It is mentioned here, however, since Urrutia[1] found a significant negative relationship using the same equation (though the figures at that time only covered the period March 1963-March 1966) for men and women 15-54, and for women 15-54. His conclusion (along with his findings of a positive relationship for women 45-59, women 15-19 and men 45-49 suggests that aggregate analysis (i.e. where age groups are not separated) is inadequate and may lead to invalid conclusions.[2] The rest of our discussion should be read with this severe limitation in mind.

Since other factors (e.g. educational enrollment) are clearly having long run impact on participation rates, unemployment rates, or both, it might be expected that the relationship would be stronger in the short run; one

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[1] Miguel Urrutia, "El Desempleo Disfrazado en Bogota", in CEDE Empleo y Desempleo en Colombia, op. cit., pages 47-48. He presented (see Table A-19 where his results are shown) only equations with significant fits, so the relationship for males in this age group was not presented; but since the coefficient was higher for the males and females together than for females alone, the relationship presumably was negative for men (who predominate in the total.

[2] Urrutia's time span is shorter than that employed in the regressions presented here, and it must be admitted that age specific regressions have sometimes very small sample sizes so that the possible errors of estimate are substantial. Another explanation of the different behavior is that Urrutia's period covered one involving a positive linear trend in unemployment; that trend subsequently reversed itself during the remainder of the total period considered here, and the best fits obtained in my regressions involve a quadratic term for time trend. In short, Urrutia's results should not be interpreted as a proof that a negative relation holds over the longer run for the age groups he specifies; but they raise the possibility that it does, in spite of the positive relation generally found here when all ages are treated together.

[3] When a $T^2$ (time squared) term is added the sign of the coefficient becomes positive.

way to express such an interaction between the two is via deviations from trends, or moving averages. The best fits obtained here systematically involved one variable expressed in absolute terms and the other as deviations from its three period moving average; the relationship was invariably positive and strong (with "t" values ranging from 5 to 10 and up). This would suggest, then, that while a number of factors determine trends and cycles in the P. R.'s, one factor bearing on them in the short run is the absolute level of unemployment. Perhaps a more plausible short run relationship would be between the deviations from trend for each variable. In most of the equations tested no such relationship was found, although when the unemployed were divided into "previously employed" and "first time seekers" a strong positive relation was found between the P. R. and the deviation from unemployment trend in the latter group. (Equation 13) but not in the former.

If in fact it can be concluded that there is a positive association between the two variables, a number of interpretations might be put forward. Credence might be given to the secondary worker hypothesis; inasmuch as some of the secondary workers were women, one might expect a positive association between the two variables to be stronger for men and women together than for men alone but this is not in general true; there is no significant difference between the "t" values of the coefficient as between one case and the other. If, then, the secondary hypothesis is at work, it should be locatable in males in terms of age groups and here unfortunately, the only study done to date--that by Urrutia--only includes the three-year period 1963-66; the fact that he finds a negative relationship for men and women together over the whole age group 15-54 (i.e. almost everyone, in quantatitive terms) is suggestive of

TABLE 20

UNEMPLOYMENT AND PARTICIPATION RATES OVER TIME

Bogota

| | Unemployment Rates | | | Participation Rates | | Males | | Females | |
|---|---|---|---|---|---|---|---|---|---|
| | Have Previously Worked | First-time Job Seekers | Total | | | Unemp. Rate | Partic. Rate | Unemp. Rate | Partic. Rate |
| March 63 | 5.4 | 3.0 | 8.4 | 33.7 | | 7.6 | 44.5 | 9.5 | 24.6 |
| June | 5.6 | 3.0 | 8.7 | 34.4 | | 7.9 | 45.6 | 9.8 | 25.2 |
| Sept | 4.8 | 2.7 | 7.4 | 33.7 | | 6.4 | 45.3 | 9.1 | 24.9 |
| Dec | 4.6 | 2.5 | 7.1 | 35.5 | | 6.8 | 48.6 | 7.6 | 25.4 |
| March 64 | 4.0 | 2.7 | 6.7 | 35.5 | | 6.1 | 46. | 7.6 | 26.6 |
| June | 4.8 | 2.5 | 7.2 | 8 | | 6.6 | 45.7 | 8.3 | 23.8 |
| Sept | 5.7 | 1.7 | 7.4 | 8 | | 8.4 | 45.7 | 5.9 | 23.9 |
| March 65 | 5.7 | 3.5 | 9.2 | 9 | | 8.3 | 44.3 | 10.8 | 21.3 |
| June | 6.1 | 2.7 | 8.8 | 2 | | 8.0 | 45.1 | 10.2 | 22.9 |
| Sept | 6.7 | 3.1 | 9.7 | 9 | | 9.5 | 44.0 | 10.1 | 20.8 |
| Dec | 5.5 | 2.6 | 8.0 | .9 | | 7.4 | 46.9 | 9.3 | 22.2 |
| March 66 | 7.1 | 3.0 | 10.1 | 32.2 | | 9.6 | 43.5 | 12.0 | 22.4 |
| June | 6.9 | 4.6 | 11.6 | 33.3 | | 10.9 | 44.1 | 12.4 | 24.4 |
| Sept | 5.8 | 3.8 | 9.6 | 32.9 | | 9.7 | 44.5 | 9.7 | 23.6 |
| Dec. | 4.6 | 4.5 | 9.2 | 32.8 | | 7.4 | 44.9 | 12.1 | 23.1 |
| March 67 | 9.8 | 6.3 | 16.1 | 33.8 | | 14.9 | 43.9 | 17.9 | 24.0 |
| June | 8.3 | 4.4 | 12.7 | 33.1 | | 10.6 | 43.7 | 15.9 | 24.5 |
| Sept | 6.4 | 4.3 | 10.6 | 33.6 | | 9.9 | 44.7 | 11.8 | 24.8 |
| Dec. | 5.5 | 4.0 | 9.5 | 32.8 | | 8.3 | 43.9 | 11.3 | 23.3 |
| March 68 | 7.2 | 6.3 | 13.5 | 34.6 | (34.4) | 10.3 | 45.1 | 18.6 | 25.2 |
| June | 6.3 | 5.3 | 11.6 | | 34.9 | 9.2 | 45.3 | 15.1 | 26.1 |
| Sept | 6.7 | 4.5 | 11.2 | | 34.5 | 9.3 | 45.2 | 14.2 | 25.2 |
| Dec | 5.4 | 4.4 | 9.8 | | 36.7 | 7.0 | 46.8 | 14.0 | 27.8 |
| March 69 | 6.3 | 4.8 | 11.0 | | 34.6 | 8.6 | 45.0 | 14.9 | 25.3 |
| June | 6.6 | 5.0 | 11.6 | | 34.6 | 9.2 | 44.3 | 15.6 | 25.5 |
| Sept. 69 | 6.0 | 2.9 | 8.9 | | 34.0 | 7.6 | 44.2 | 11.0 | 25.1 |
| Dec. 69 | 3.3 | 3.5 | 6.9 | | 33.5 | 6.1 | 45.8 | 8.1 | 24.3 |
| Mar. 70 | 5.6 | 3.2 | 8.8 | | 35.2 | 6.4 | 45.3 | 12.6 | 26.1 |
| June 70 | 4.1 | 3.8 | 7.9 | | 34.6 | 6.3 | 45.0 | 10.4 | 25.0 |

Sources: Rafael Isaza, "Ocupacion y Desocupacion en Bogota" in CEDE Empleo y Desempleo en Colombia, op. cit., p. 115, and Revista del Banco de la Republica, Mayo 1971, p. 790. Note that no corrections have been made for any years. Slighton (op. cit.) indicated that there was a downward bias in the unemployment figures over 1963-early 1966. No comparable evaluations are available for the more recent period. As noted elsewhere, the CEDE figure for June 1970 (7.9) is far below DANE's estimate (apparently corresponding to July (?)) of 13.0%.

a basic difference in his results and mine.[2] In any case, further analysis taking age groups into account is clearly called for.

Probably the most plausible interpretation of the relationship observed would involve joint causation; with the urban economy so related via migration to the rural one, the implicit "closed economy" assumption of much of the developed country literature on this question is clearly invalid. It might be hypothesized that a speedup of migration (which typically brings a disproportionate number of working age people to the city, would both increase participation rates because of the age structure of the immigrants and their need to work)[1] and push up the unemployment rate, as the competition of the immigrants registers itself. Or if the causal sequence works in the opposite direction, i.e., if the flow of migration is determined by urban conditions one might interpret a high unemployment-participation rate link as resulting from a relation between high unemployment and relatively good times in which a fair share of people are willing to wait to get a job rather than to take whatever comes along.[3] Finally it is quite plausible to argue that an important part of the positive association involves a causal relation from P. R.'s to unemployment. Much of the unemployment is of young people and the participation rate for men is still below 80% for the 20-24 age group. If the participation rate rises, this group, characterized by unemployment as they search for the first or

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[1]Average participation rates tend to be much higher for immigrants than for natives, and this is probably not entirely due to the age structure; typically the ratio is two to one. See Isaza and Ortega, op. cit., p. 111.

[2]Although it is true that the ages above 54 determine fluctuations in the average P. R.'s out of proportion to their numbers.

[3]Very conceivably a better and more complete specification would alter the results; it is possible, for example, that there is an important seasonal effect not taken into account.

the desired job, would help to generate the observed relation.

In summary, it would appear that at present the data give some tentative refutation of an important "discouraged worker" effect, but it will remain quite tentative until more age specific analysis is undertaken.[1]

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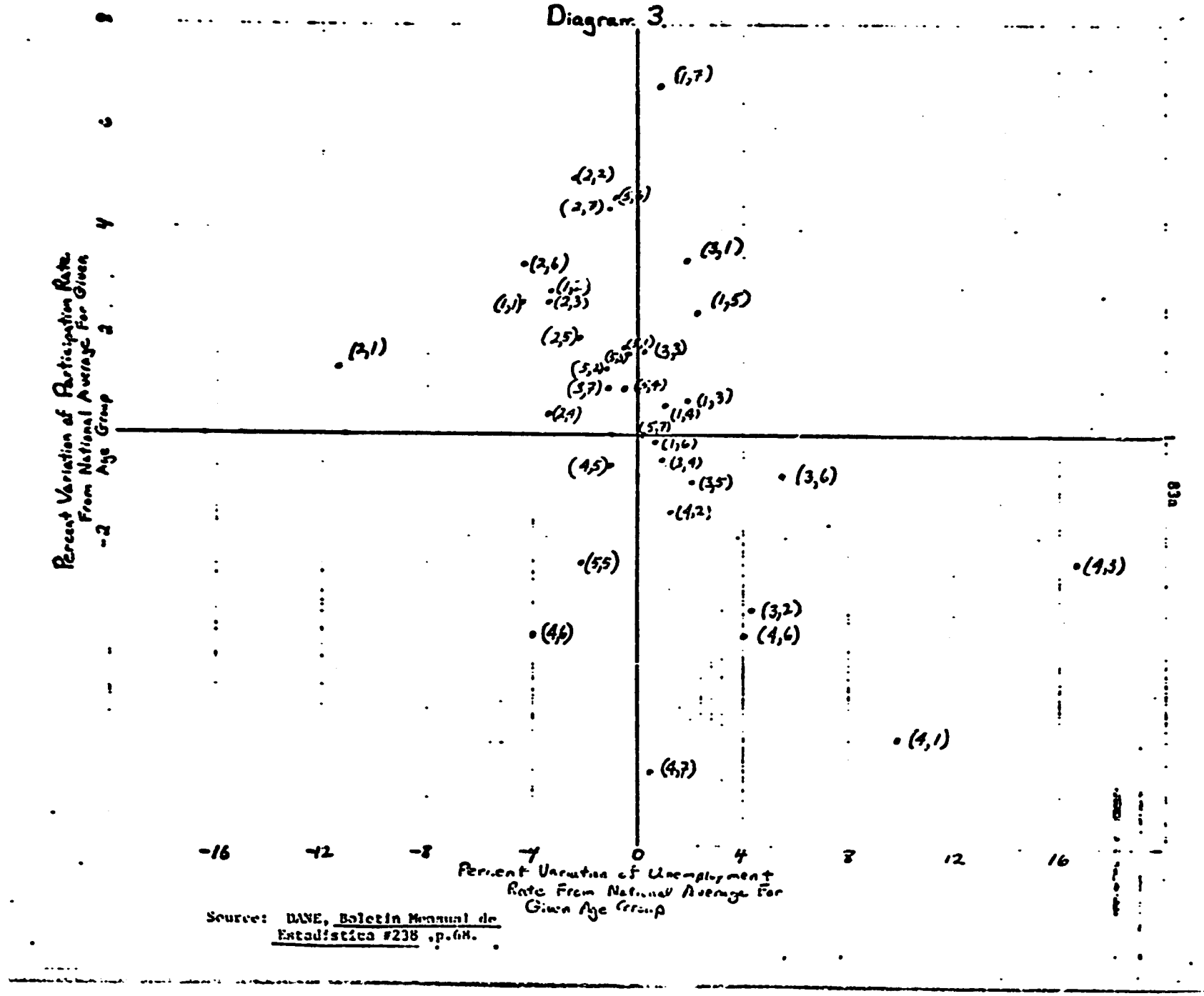
[1] Nohra Rey, Caracteristicas y Determinantes de la Participacion de la Poblacion en el Mercado Laboral de Bogota," Revista de Planeacion y Desarrollo, Volumem 1, # 3, Octobre 1969, p. 89 presents the interesting hypothesis that a relationsnip exists between the unemployment rate and the participation rate when the former is below 10%, but that when it surpasses that level other factors come into play so that no relationship is found. For the three year period she treats, the hypothesis holds, although variations in both participation rate and unemployment rate appear to be too small to provide much of a test of this hypothesis. There was a slight upward trend in the unweighted average of age specific participation rates for men ages 25-54 and the unemployment rate was a trifle lower for 1965 than the two surrounding years. It is of interest that unemployment rates were noticeably higher for men 10-24 in 1965 and 1966 than in 1964, were a little higher for the age group 25-29 and were fairly significantly lower for three of the four age groups included in 30-39. Some of this may be random error. But the participation rates for people over 55 were also substantially higher so this overall pattern is consistent with the "secondary worker" hypothesis. The figures for women are somewhat confusing since the hypothesis takes on particular persuasiveness for men when 1965-66 are treated as a unit; for women 1965 is quite atypical of the other two years but they are not far apart; if 1965-66 is treated as a unit it is in general true that the age groups 15-29 had lower participation in 1965-66 suggesting that another possible aspect of the situation, the greater freedom of choice of these women as to whether to enter the labor force, may have been playing a role. An alternative interpretation would be that the drop in 1965 corresponded to the initial shock and the increase in 1966 to secondary workers entering the force. The female unemployment rates were substantially higher in '65 and '66 for people below 30 suggesting the secondary worker hypothesis; there appears to be substantial standard error in these figures, however, so interpretations are difficult. For men, the higher 1965 and 1966 figures were almost entirely due to more people looking for jobs in the age group under 25.

For such a short set of years, figures are difficult to interpret also because of the problem of lags. A plausible interpretation would be that the increasing difficulty of acquiring jobs in 1965 for men, related to an increase in the unemployment rate from 6.9 to 8.4 and increases in the participation rate for people under 30 while not associated with increases in female participation in 1965 (though there were increases in the unemployment rate) was partly responsible for the return in 1966 to the high female participation rates at least for certain age groups.

The only cross-sectional test to date of the relation between unemployment and participation rates was undertaken by DANE, on the basis of its 1970 Encuesta de Hogares.[1] If each of the five regions into which the country was divided for purposes of the survey is considered as an observation, a rather clear negative relation appears for urban males (See Diagram 3). Dividing the males by age groups, Salazar notes that for 24 of the 34 observations the difference from the respective national mean for the two variables (op. cit., p. 66). Perhaps more significant is the fact that this negative relation is strongest in the younger age groups (12-24) where the participation rate is lower (and has been falling in the last couple of decades). For the youngest group (12-19) the result might be doubted due to the presence of education as an important independent variable. But, if instead of comparing the participate rate with the unemployment rate, the share of boys "not attending school and in the labor force" were used to measure participation, the relation remains fairly convincingly negative. (It could be argued, of course, that remaining in school is a reaction to poor occupational possibilities.) Overall, this study lends some support to the argument that employment

[1] DANE, Boletin Mensual de Estadistica, #237.




Source: DANE, Boletin Mensual de Estadistica #238 ,p.6A.

difficulties do play a role in holding down participation rates for young males.

The participation rate--unemployment rate relation is weak--almost absent--for males 25-54 where the participation rates are generally quite high; it reappears fairly strongly for men of 55 and over (See Diagram 3.)[1] Since immigration to urban areas (or from one to another) is linked closely to job opportunities and is a phenomenon of youth, it would not be surprising if movement to lower unemployment cities raised their participation rates, with outmigration having the opposite effects for high unemployment areas.[2] People still in school presumably do not have the same incentive to migrate to low unemployment areas. For age groups of lower mobility, the relation could generally be expected to be weaker.[3]

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[1]Although, for reasons discussed above, unemployment figures in the rural areas are difficult to interpret, it is interesting to note that the impact of age on the participation rate/unemployment rate relation is the opposite for rural areas as for the urban economy. The negative relation is strong for ages 25-54 and weaker or absent for the younger and older groups. Possibly this difference is related to the nature of the rural-urban migration process.

[2]The large size of the DANE "regions" implies less across boundary migration than if the unit was, for example, the department, though in some cases it is substantial. The intra-regional, rural-urban migration could produce the effect, discussed, however.

[3]For reasonable certainty as to the causal mechanism leading to the observed negative relation, it would be necessary to normalize for average income and city size; both unemployment rates and average income levels tend to be higher for larger cities and participation rates tend to be lower. There is a serious identification problem here.

The results for urban women are interesting, showing some positive correlation between the two rates, in particular in the age group 45-54. Evidence for the frequent hypothesis that the female participation rate be positively correlated with male unemployment rates does not show up.[1]

Marital Status and Participation

Participation rates are normally much more affected by marital state for women than for men [2] this is borne out by 1951 census data--information from the 1964 and 1970 sources is not available. But even for men, participation (rural and urban together) was uniformly lower for single than for married men, with a minimum difference of 3 percent in the 20-24 age groups, widening to 14% for the 65 and up group. Widowers, free union, and separated persons generally had rates between those two categories. For

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[1] Such a theory would not necessarily be expected to hold in a cross-regional study such as this: it would be more natural to expect such a relation on an over time basis.

[2] The effect of marital status on participation rates in the U.S. is especially clear and interesting for young males, for example, in the age group 20-24 single males have recently had participation rates of less than 70 percent, while married males have systematically been 95 percent or above. A very substantial difference characterized the 25-44 age group also. Rates for widowed, divorced, or separated men are closer to the single rates than the married ones. For women, the rates vary in the opposite direction and quite strongly (See Presidents Manpower Report, op. cit., p. 246). Since Colombian males tend to marry later than american males, this might account for part of the low participation rates for younger men.

women the major determinant of low participation is being married or in union libre; the single state was not conducive to high participation--for no age group in 1951 did the participation rate reach 10% for the former groups, while it was as high as 43% for the unmarried women in the 25 to 34 age group.[1] (This figure is unfortunately, hard to interpret due to the impossibility of making the urban-rural division.) Widows and separated women were closer to the single pattern, and women in free union close to married women but having somewhat higher participation.[2] For free union and married women the lowest participation rates were for the age group 15-24, presumably when children are coming fastest. Participation rates for married women are generally slightly higher in industrialized countries than in non-industrialized ones, but the Colombian levels (before their recent increases) tended for the age groups 15-44 to be only about one quarter of those typical of non-industrialized countries (a little over 20%). A special characteristic of the single girl is her late entrance into the labor force in Colombia. Although both these phenomena are no doubt less prominent now than in 1951, it does seem clear that they continue to be present.

Evidence on the Extent of Disguised Unemployment and Underemployment

Open unemployment and low participation rates which are due to the difficulties of job acquisition do not exhaust the forms of underutilization of human resources. In a country like Colombia it might well be argued that they are less important than the more pervasive disguised unemployment associated with a dualistic economic structure. If the interpretation of open

[1] Roberto Jungito, Alvaro Lopez, Alvaro Reyes, Diego Salazar, Analyses de la Estructura y Evolucion de la Fuerza de Trabjo Colombiana 1938-51 y 1964, y Projection de la Poblacion Economica mente Activa 1965-85, CEDE, Universidad de los Andes, Bogota, 1970, p. XVI. The authors indicate that the category "hogar" is a very imprecise one, and is probably used in many cases of doubt, since in any case the women in question will tend to be in the "household."

[2]See Francisco Ortega, "Algunos Determinantes Demograficos de la Fuerza de Trabajo," Empleo y Desempleo en Colombia, Centro de Estudios sobre Desarrollo Economico, Universidad de los Andes, Bogota, 1968, p. 80. Ortega observed that in 1951 the participation rates in Colombia for ages 15-44 tended to be only about half those found in the industrialized countries, (for comparisons with the industrial countries see United Nations, Demographic Aspects of Manpower, p. 38). It has already been noted, however, that the urban rates rose rapidly in the sixties.

unemployment presented at the beginning of this paper is reasonably accurate, it could certainly be argued that in terms of welfare cost that form of underutilization is less important than disguised forms.[1] Low participation rates also necessarily reflect an alternative and a not too marginal economic situation.

In any case, it is useful to distinguish the following forms of labor underutilization:

1. open unemployment;

2. open underemployment, where the individual openly seeks more hours of work than he presently executes;

3. disguised unemployment, where the individual is not in the labor force although he would be if attractive employment were more easily available;

4. disguised underemployment, where the individual seeks less hours work than he would if more attractive employment were available.

5. inefficient employment, where although the individual is employed in terms of the above criteria he has lower productivity than would be possible under some other labor market arrangement. It is important to emphasize here that simple low productivity is not the defining characteristic of this form of human resource loss; even with perfect allocation, productivity of labor is necessarily low in a poor economy. The reference is to a situation like that frequently described in the labor surplus literature, where marginal productivity of labor is low or zero in the traditional

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[1] It might seem, on the other hand, that if much of the open unemployment is "white collar" type, that the opportunity cost of its non-use in terms of output foregone could be particularly high. This issue is not clear, however. An alternative interpretation would be that the marginal productivity of this labor is low. More information is needed to clear the air.

sector but much higher in the modern sector, permitting the conclusion that some of the former labor would have much higher productivity if transferred to the latter sector. Over-allocation of labor to a monopolistically competitive sector where its marginal social productivity is zero though the marginal private productivity may be substantially positive would also fit this category.

The Bogota evidence over the 1963-66 period indicates that in tight situations it is not only new entrants who are worse off; over this period the percent of unemployed without previous job experience fell; since there was not a violent fluctuation in the unemployment rate over this period, it is difficult to speculate on trend vs. non-trend movements.

Over time indicators of part-time work and other forms of underemployment are unfortunately unavailable, though pieces of information are available for some recent years. A CEDE study of 1963 including Bogota and some towns nearby found rates of unemployment as defined by percent of total available (see definition in footnote) hours not being worked, ranging up to 16.5% whereas the traditionally defined open unemployment rate ranged only up to 9.0%. But the

definition used to derive the former figure may have implied an upward bias.[1] The 1964 population census included a question (for people in the labor force) on the number of months worked during the previous year (including time not worked due to paid vacation, sickness, strikes, etc.). For both the active population as a whole and the non-agricultural population, the average number was about 9-1/4 to 9-1/2 months. This figure is, however, difficult to interpret.[2] The ILO report presents guesstimates of the relative importance of three forms of underemployment (items

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[1]Miguel Urrutia, Metodos Para Medir Los Diferente Tipos de Subempleo y Desempleo en Colombia," Empleo y Desempleo en Colombia, CEDE, Universidad de Los Andes, Bogota, January 1968, p. 35. The definition which led to the cited estimates of unworked hours involved treating anyone who worked less than 32 hours a week as unemployed during the hours necessary to make up 48 per week (people on vacation, strikes, sickness and so on were not included). This would be an underestimate of total hours necessary to make up 48 for everyone, since people working more than 32 hours were not considered. But when only people who were working less than 32 hours and who said they wished to work more were included, the rates tended to be not much above the open unemployment rate (in the two places where this measure was also taken).

[2]The statistic included some proportion of underemployment, since in the case of persons working less than 6 days during the week of the census the enumerators were instructed to record the time they were employed in terms of the annual equivalent of months at work; it is not clear how this part of the answer was combined with the other part on unemployment so the measure is difficult to interpret. (See ILO, op. cit., p. 354.) Since a number of modern sector workers (almost all) work less than six full days, this would seem to imply that those working five days would be recorded as having an underemployment rate of 16%; and the data for them would be based on the censal week rather than the year. For those fully employed (6 days), the annual underemployment figure would appear. The process would lead to an upward biased estimate of underemployment.

2,3, and 4 mentioned above) based largely on data of the 1964 population census, it concludes that about 25% of the potential labor force goes unused because of open unemployment or one of these forms of underemployment. (See Table A-4).[1]

Dane's 1970 survey is easier to interpret than the earlier sources. It estimated open underemployment (defined there as people working less than 32 hours in the censal week[2] and wanting to work more) as 2.7 of the labor force (the same as the ILO estimate). This rate was quite different for men (1.7 urban, 0.9 rural and 1.3 overall) and for women (3.8 urban, 4.3 rural and 4.0 overall).[3] The percentage of persons affected by open underemployment is greater than the full person equivalent rates as calculated (see Table 22).[4] The greater difficulty of attaining employment experienced by women, especially in rural areas, comes through once again.

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[4]It is interesting to note that this is also true of open unemployment. In the U.S. (and probably in Colombia), the number of people suffering some unemployment in a given year is usually over three times the unemployment rate itself. (See Table A-11). The number suffering unemployment more than once during the year is about equal to the unemployment rate.

[2]DANE, Boletin Mensual #239, p. 60.

[3]DANE, op. cit., p. 72.

[1]This figure, however, includes a high 14% open unemployment--a figure based premarily on CEDE's eight city unemployment survey of 1967. That year appears to have had one of the highest unemployment rates on record; DANE's 1970 figure was 10%.

In absolute terms, the important open underemployment is found for men in urban services and in agriculture, and for women in services and manufacturing, both rural and urban. (See Table 21) Since the 1964 population census information did not distinguish open underemployment from other forms, no over time comparisons can be made at the national level. Urrutia's 1967 figures[1] also apparently indicated two percent, a little lower than DANE's 1970 national urban figure (2.4).

A more difficult form of underutilization of human resources to estimate is hidden unemployment and underemployment (persons not in the labor force but who would seek work if employment problems were less)[2] and persons in the labor force and not seeking more work but who would do so if the chances of success were better.

Although open to much doubt, it may be of interest to try to deduce something about disguised unemployment by considering the evidence on the participation rate/unemployment rate relation. How much "disguised unemployment" takes the form of low participation rates? . . .

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[1] Miguel Urrutia, El Desemplec Disfrazado en Bogota, CEDE, Empleo y Desempleo en Colombia, 1968.

[2] The concept should probably be conceived of in net terms, i.e. exclusive of people now in the labor force who would leave it if the unemployment situation were less difficult, e.g. if their husbands could find work.

Table 21a

OPEN UNDEREMPLOYMENT, MEN-URBAN AND RURAL

| | Field of Activity | Distribution of Underemployment | Supply of Jobs | Rate of Open Underemployment |
|---|---|---|---|---|
| URBAN: | Services | 0.6 | 22.3 | 2.5 |
| | Commerce | 0.3 | 19.4 | 1.7 |
| | Agriculture | 0.3 | 14.0 | 2.0 |
| | Manufacturing | 0.2 | 22.2 | 0.9 |
| | Construction | 0.2 | 8.9 | 1.9 |
| | Other | 0.1 | 13.2 | --- |
| | Total | 1.7 | 100.0 | 1.7 |
| Rural: | Agriculture | 0.7 | 85.7 | 0.8 |
| | Other | 0.2 | 14.3 | [illegible] |
| | Total | 0.9 | 100.0 | 0.9 |

Source: DANE, Boletin Mensual de Estadistica, #238, p. 73.

Table 21b

OPEN UNDEREMPLOYMENT - FEMALES - RURAL AND URBAN

| Field of Activity | Distribution of Underemployment | Supply of Jobs | Rate of Underemployment |
|---|---|---|---|
| Services | 1.7 | 50.1 | 3.3 |
| Manufacturing | 1.4 | 20.8 | 6.6 |
| Commerce, Restaurants & Hotels | 0.6 | 23.1 | 2.4 |
| Other | 0.1 | 6.0 | --- |
| Total | 3.8 | 100.0 | 3.8 |

Table 21c

OPEN UNDEREMPLOYMENT-RURAL FEMALES

| Fields of Activity | Distribution Underemployment | Supply of Jobs | Rate of Underemployment |
|---|---|---|---|
| Manufacturing | 2.4 | 25.3 | 9.2 |
| Services | 1.3 | 35.3 | 3.7 |
| Commerce Restaurants & Hotels | 0.7 | 11.4 | 6.3 |
| Agriculture | 0.4 | 26.7 | 1.5 |
| Other | --- | 1.3 | --- |
| Total | 4.8 | 100.0 | 4.8 |

Source: DANE, Boletin Mensual #238.

The most recent attempt to estimate these phenomena was by DANE,[1] the results are summarized in Table 22, and cross region data for urban men presented in Diagram 3. Salazar concluded that hidden unemployment was virtually non-existent in the case of rural men but might reach 6%[2] for urban men, with the rate concentrated in the younger (15-24) and older (55 and up) age groups. No attempt was made to estimate a figure for women since their rapid increase in the labor force makes any calculation highly speculative. This does not mean, of course, that the figure could not be significant.[3]

The nature of the DANE calculation suggests that it provides an upper limit estimate (barring serious data problems).[3.5] The meaning of peoples' being outside the labor force (especially during a given week--as opposed to a given year) is hard to interpret,[4] so it is worthwhile comparing the Colombia results with those of other countries. U.S. data suggest that the Colombian picture may not be an atypical one, (See Table 23), i.e. that about

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[2] Note that this rate is calculated on the base of total population 12-64 rather than on the labor force as in the case of the unemployment rate.

[1] (See DANE Boletin Mensual de Estadistica #238, p. 75).

[3] On the other hand, some women would presumably leave the labor force if their husbands could get jobs.

[4] The extent of hidden unemployment and underemployment, assumed to be reflected in low participation rates may also be ascertained in some measure by consideration of the status of non-participants, but, as discussed earlier, the Colombian breakdown is not adequate to permit any very interesting conclusions on this issue.

[3.5] Urrutia's results for Bogota in 1965 (Urrutia, "El Empleo Disfrazado...", op. cit.) would suggest that the disguised unemployment in Bogota was not too great, and similar calculations for June 1969 led to the same conclusion;(specifically that if this unemployment were zero this would increase the rate of employment by only 0.6%, see Rafal Isaza B., El Desempleo en Bogota Durante el Periodo 1963-1970, Trabajo no publicado; reported in Rafael Prieto, op. cit., cerca p. 200.)

80% of theoretically possible labor force hours is what can be anticipated, and about 60-70% of all possible hours of people above about 15 years of age.

The disguised underemployment rate is estimated as 3.2% (see definition DANE, op. cit., p. 50; like open underemployment, it is measured in person-equivalents). Since the methodology is not presented, it is not clear how large a percent of the population would be affected, nor is it clear how accurate the calculations are. Again the rate is much higher for women than for men, and dramatically high for rural women. Participation rates for married women are generally slightly higher in industrialized countries than in non-industrialized ones, but the Colombian levels (before their recent increases) to be only about one quarter tended for the age groups 15 to 64 these typical of non-industrialized countries (a little over 20%). A special characteristic of the single girl is her late entrance into the labor force in Colombia. (a little over 20%). A special characteristic of the single girl is her late entrance into the labor force in Colombia. Although both these phenomen are no doubt less prominent now then in 1951, it is especially clear that they continue to be present.

Table 22

HIDDEN UNDEREMPLOYMENT - MEN AND WOMEN, URBAN AND RURAL

| Field of Activity | Participation in Underemployment | Share of Labor Force | Rate of Hidden Underemployment |
|---|---|---|---|
| **Rural Women:** | | | |
| Manufacturing | 5.8 | 25.3 | 22.8 |
| Agriculture | 2.6 | 26.7 | 9.8 |
| Services | 2.3 | 35.3 | 6.6 |
| Other | 0.9 | 12.7 | --- |
| Total | 11.6 | 100.0 | 11.6 |
| **Urban Women:** | | | |
| Services | 2.1 | 50.1 | 4.3 |
| Manufacturing | 1.4 | 20.8 | 7.0 |
| Commerce, Restaurants & Hotels | 0.8 | 23.1 | 3.7 |
| Other | --- | 6.0 | --- |
| Total | 4.3 | 100.0 | 4.3 |
| **Rural Men:** | | | |
| Agriculture | 2.4 | 85.7 | 2.8 |
| Other | 0.3 | 14.3 | --- |
| Total | 2.7 | 100.0 | 2.7 |
| **Urban Men:** | | | |
| Agriculture | 0.5 | 14.0 | 3.5 |
| Services | 0.5 | 22.3 | 2.2 |
| Commerce, Restaurants & Ho | 0.3 | 19.4 | 1.5 |
| Other | 0.5 | 44.3 | --- |
| Total | 10.8 | 100.0 | 1.8 |

Source: DANE, Boletin Mensual de Estadistica #238, pp. 74-76.

Evidence on the Alternatives to Unemployment

Unless a person moves from involuntary to voluntary unemployment status, he must eventually either leave the region (in which case he drops out of the figures entirely) or accept some job; it is of interest to distinguish (a) the person who gets (roughly at least) the job he wanted, (b) the person who accepts a less attractive job than he had hoped for[1], (c) the person who starts up his own business, frequently in a monopolistically competitive type of industry as a result of failing to get the job he wanted, and (d) the person who goes elsewhere.

Data are not available over a sufficient length of time to give clues on the extent to which aspirants to particular jobs are eventually satisfied after a certain wait, and the extent to which they must accept jobs relatively unattractive to them. The 1967 data indicate that a higher share of the population were hoping to enter certain occupations than were in them; a comparison of these percentages with the distribution of the marginal increase of the labor force over the intercensal period is of interest, suggest tentatively that some aspirations are not met, in the sense that the unemployed eventually have to accept jobs with characteristics they did not want. This conclusion is very tentative however. (See Table A-15.)

Some evidence has been cited to the effect that outmigration from cities is significant. While the net rates of immigration even to

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[1]Alternatives (a) and (b) could better be expanded into a spectrum of possibilities.

Colombia's largest cities have been very high in the last couple of decades, there appears also to have been substantial outmigration.[1] This suggests the interpretation of it as a safety valve tending to control unemployment rates. Unfortunately the evidence is still rather conflicting on this issue; Simmon's study located substantial return flow from Bogota to other localities in Cundinamarca and Boyaca[2]; although no direct evidence was sought with respect to the cause of the return outflow, the surrounding conditions did not suggest that it reflected employment difficulties in Bogota. Udall, while estimating high gross outmigration rates,[3] did not find any obvious relation to unemployment rates. Possibly the outmigrants had been looking for white collar jobs, did have difficulties finding them, and having fairly good prospects in smaller places, returned to them. This would take into account Simmon's observation that their education level was relatively high and their background relatively more affluent than

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[1]The most detailed study of this process, Alan Udall's Yale dissertation on the Bogota labor market, suggests quite high rates of gross outmigration from Bogota.

[2]Note that the ratio of people living in Bogota but born elsewhere to people living elsewhere and born in Bogota was quite high in 1964; this figure represents an accumulation over a long period of time and is not necessarily representative of the relative flows in recent years, but it does suggest that relatively few people born in Bogota emigrate. Udall's conclusion that gross outmigration has been large, and Simmon's evidence that return migration has been important would partly suggest that much of the outmigration is of non-natives.

[3]The indirect methodology used implies, unfortunately, substantial uncertainty for these estimates.

other immigrants to Bogota.[1]

Out-migration from small and intermediate cities is heavy, and is presumably directly primarily at larger cities. Again it is not clear how much of it is due to unemployment problems nor the extent to which it relieves such problems. McGreevey hypothesized that "fill-in" migration was prevalent in Colombia; i.e. natives of smaller cities would move to larger ones while natives of rural areas "filled their places," migrating into the smaller towns.[2] Garcia[3] questioned this hypothesis, and found very considerable indirect step migration by immigrants to the large cities. Neither study analyses out-migration as an accomodation to specific unemployment problems.

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[1]One might, nevertheless, expect some outmigration by the lower income immigrants. It was argued above that the lower unemployment rates of immigrants compared to the native born could be related to the danger the low income migrants would be in if they moved without having a job fairly secure; since their wealth levels are likely to be lower also, it might be argued that they should migrate out more rapidly if employment did not appear. Unfortunately evidence is not available to test this hypothesis, and it is not an obvious one since there may be no good alternatives in sight for this group elsewhere either.

[2]See William P. McGreevey, "Causas de la Migracion Interna en Colombia" in Empleo y Desempleo En Colombia, op. cit., p. 211.

[3]Garcia, op. cit.

Changing Occupational Structure as a Measure of and Accomodation to Employment Difficulties.

If it is true, in some measure, that unemployment over any length of time is a luxury available only to those with considerable financial backing, then it would seem to follow that a result of the phenomenon of "too little capital (and other non-labor resources) to match the available labor at the capital/labor ratio characterizing the modern sub-sector of the economy" will be a subsector with a very low ratio of capital to labor; an increasing "employment problem" should be reflected in an increasing disparity of capital/labor ratios in different sub-sectors of the system, an increasing widening of differences between average and marginal labor productivities of these sub-sectors, and continued very low or even decreasing income per capita for some low income groups. The two categories most frequently suggested as lending themselves to very low capital/labor ratios are small scale commerce and certain types of personal services (gardeners, possibly maids, and others), a number of these being "own account" type occupations.[1] Some pieces of evidence point to such a phenomenon in Colombia, but overall the picture is mixed and confusing at this point.

Most economies under successful development show an increasing share of the population being employed by someone else.[2] When employment

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[1] A second condition likely to be relevant is easy entry, i.e. the possibility of low capital/labor ratios may not be enough if, for example, there are severe imperfections in the product market (e.g. licensing requirements).

[2] This is an inevitable concomitant of increasing size of firm (in number of workers).

prospects are very dim one might expect an increasing share of the labor force to be pushed into own-account activities. Overall proletarization seems to have increased fairly continuously since 1938; the sum of white collar and blue collar workers was, for men, 49.7% in 1938, 52.5% in 1951, 54.5% in 1964 and 59.1% in 1970. (See Table 23.) For women it was 50.0% in 1938, 67.6% in 1951, 72.3% in 1964, and 72.1% in 1970, indicating that here there was a rather marked shift over the 30 year period. Overall (men and women) the increase was from 49.8% in 1938 to about 60% in 1970. Part of the overall proletarization over this period was due to a decreasing share of the labor force found in the relatively non-proletarized agricultural sector (the labor force share in the primary sector[1] was 65.0%, 55.5%, 48.9% and a little over 40% in the four years) and in part to an increasing proletarization ratio in non-agriculture--from 57.4% in 1938 to 70.0% in 1970.[2] Overall, a fairly clear picture seems to emerge overall from the table; for both the urban and non-agricultural populations the proletarization ratio rose rapidly between 1938 and 1951, eased up in the next 13 year period and fell a little in the 1964-1970 period as a result of a fall in the ratio for women: that for men, at least for non-agriculture, seems to have kept moving up a little.

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[1] The ratio is about the same in agriculture and in the total primary sector.

[2] Problems of comparison are introduced by the lack of "independent workers" category for secondary and tertiary sectors in 1938( Among other problems - see Table 23.)

Table 23

## Proletarization Rates*
### Censal and Sample Years; Rural, Urban & Total

| | Rural | | | Urban | | | Total | | | Agriculture | | | Non-Agriculture | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Men | Women | Total | Men | Women | Total | Men | Women | Total | Men | Women | Total | Men | Women | Total |
| 1938[a] | | | | | | | 49.72 | 50.02 | 49.79 | 46.15 | 39.55 | 45.47 | 59.70 | 54.53 | 57.44 |
| 51[a] | 46.49 | 49.92 | 46.91 | 63.77 | 78.33 | 68.10 | 52.52 | 67.62 | 55.41 | 44.03 | 31.87 | 43.47 | 68.03 | 22.98 | 69.85 |
| 64[a] | | | | | | | 54.48 | 72.29 | 58.06 | 42.75 | 31.48 | 42.21 | 70.00 | 77.52 | 72.57 |
| 70 | | | 47.39 as there of | 67.89 | 73.82 | 70.00 | 59.14 | 72.14[b] | 59.92-60.83 | 46.39 | 46.00 | 46.37 | 71.85 | 74.08 | 70.03 |

*Empleados and Obreros, Labor Force Indicating Occupational Position.

[a]Excludes "sin informacion"

[b]Deduced from total and male figures.

Sources and Methodology: The major possible source of incomparability among the sources relates to agriculture in 1938, where the category "servants" appeared without indication as to whether these where paid individuals or not. The majority were women. For present purposes 60,000 were assumed to be family helpers, based on a comparison with the "family helper/field worker" ratio for women in 1951 (about 0.60); assuming the same ratio in 1938 there would be 30,000 such people, or 1/3 of the total number of servants. In the case of men the category "domestic activities" is difficult to appraise, but 1/3 of these were assumed to be paid workers and the rest in effect family helpers; all of the "servants" were assumed to be family helpers although this may be a misinterpretation; if so, the proletarization is underestimated by up to 5 percentage points. But there must have been helpers in 1938 and unless the "peones y obreros" category included these people, the 35,000 listed here is lower than what would have been expected (there where 202.5 thousand in 1951); in fact this great difference does suggest that unless "peones y obreros" did include some family helpers, then the proletarization rate is overestimated at this time. But more detailed research would have to be undertaken to judge this, probably on a department by department basis. I have found no reference giving leads on whether the category "domestic activities" could include paid workers nor whether male servants, to be included in the labor force, must necessarily be paid.

Sources and Methodology for Table 23, continued:

The 1970 figures also present non-comparabilities due to the incompleteness of the results of the sample survey published to date. The tables published in Boletin Mensual de Estadisticas, #230, deduce something about the occupational position breakdown, referred to occupied people rather than the total labor force; for the previous years, although first time job seekers where excluded, unemployed persons who had been previously employed were included as far as could be seen. The figures presented here for 1970 are somewhat above those directly deduced from the tables referring to occupied persons, as seems plausible given the logical interpretation that of the unemployed a higher share would be in the aid worker catagories. The total proletarization ratio in which we place greatest confidence here, 60.8, was above the 59.1 estimated from the table which included only the occupied population, and 59.5, estimated from a table which appeared to include occupied population working more than 15 hours. An attempt was made to adjust all other calculations on the assumption that the 60.8 figure was correct; this may have led to problems since equal upward adjustment to the rural and urban ratios on the one hand and the agriculture and nonagriculture ratios on the other hand may not have been a valid procedure. As a result it is possible that the urban and nonagriculture figures are downward biased and the rural and agricultural are upward biased; but it seems unlikely that these biases could exceed say 1%. Another possible source of error in the nonagricultural figures results from the fact that they were deduced indirectly from the total and agricultural figures, using the weights applied for agriculture. The indirectness of the methodology implies that any interpretational errors could have led to mistakes in the final figures.

Note also that the application of wrong regional weights for males and females separately in the agricultural sector has led to some error in those estimates, and since the non-agricultural male and female estimates were based on the agricultural ones and the total, there must be errors there too. These figures must be thought of as preliminary ones.

An additional source of possible error in the over time comparisons relates to the handling of people who did not report occupational position. They were not presented as a separate category in 1970 so it was clear how much information had to be discarded on this account; presumably it was small. The same was true in 1964 but in 1938 and in 1951 the number was large enough so that if it was not fairly proportional to the other categories disregarding it (as we have done) could have led to some error.

In view of our present concern-unemployment-and given that it has frequently been argued that the increased share of own-account women in the urban labor force is a reflection of difficulties in the labor market, it is useful to disaggregate this apparent increase in the proletarianization ratio according to whether the increase is in family helpers, employers, or independent workers. Note that the increase in unpaid categories over 1964-70 appears to have occurred in all three categories, i.e. employers, independent workers and family helpers. (See Table A-17.) The sources of this deproletarization are not clear; it is related, certainly, to the increasing share of the labor force in commerce, restaurants, etc., the paid worker ratio is low in these sectors. The expansion of small scale manufacturing in this period may have played a similar role. (Sectoral changes are discussed below.)

Accompanying the proletarization (increasing share of paid workers as opposed to employers or independent workers) over time, is an increasing share of paid workers found in large establishments; the large establishment sector might, in some respects, be dubbed "modern." Table 24 presents a rough estimate suggesting that between 1951 and 1964 the share of the labor force in establishments of 5 or more workers (or, in the case of agriculture, having more than a certain amount of land) rose from 33% to 37%; when only non-agriculture is considered, the share rose from 43.6% to 46.1%; these trends have al-

Table 24

Preliminary Estimates
of a Modern-Traditional Breakdown of the
Colombian Labor Force - by Sectors*

| | 1951 | | | | 1964 | | | |
|---|---|---|---|---|---|---|---|---|
| | Modern | Traditional | Total | % Modern | Modern | Traditional | Total | % Modern |
| Agriculture, etc.[a] | 570.0 | 1646.0 | 2215.0 | 25.7 | 702.0 | 1790.0 | 2500.0 | 28.1 |
| Mining | 34.7 | 26.6 | 61.2 | 82.6 | 45.0 | 36.3 | 81.3 | 55.4 |
| Manufacturing | 185.5 | 289.2 | 474.2 | 39.1 | 310.0 | 359.1 | 669.1 | 46.3 |
| Commerce | 35.0 | 148.0 | 183.0 | 19.1 | 108.0 | 274.3 | 382.3 | 28.3 |
| Construction | 112.9 | 20.0 | 132.9 | 84.9 | 150.7 | 70.0 | 220.7 | 68.3 |
| Transportation, etc.[b] | 118.3 | 10.3 | 128.3 | 92.2 | 181.8 | 10.0 | 191.8 | 94.8 |
| Personal Services (excluding domestic & government) | 67.7 | 68.0 | 135.7 | 49.9 | 135.1 | 100.0 | 235.1 | 57.5 |
| Government & Public Utilities, | 139.2 | | 139.2 | 100.0 | 215.7 | | 215.7 | 100.0 |
| Domestic Service | 0 | 333.7 | 333.7 | 0 | 0 | 488.5 | 488.5 | 0 |
| Total Classified | 1263.2 | 2541.5 | 3804.7 | 33.20 | 1848.3 | 3136.2 | 4984.5 | 37.08 |
| Non-Agriculture | 693.2 | 895.5 | 1588.7 | 43.63 | 1146.3 | 1338.2 | 2484.5 | 46.14 |

[a]Includes fishing and forestry.

[b]Includes storage and communications

*NOTE: No allowance is taken here of unemployed, non-classified or otherwise confusing cases. For some sectors, figures are adjusted upward for census underenumeration and in other cases this is not done, so some incomparability results. But these weaknesses are small compared to the problems in estimating the modern-traditional breakdown within the sectors themselves.

most certainly continued in subsequent years.[1]

The frequently hypothesized process whereby the lack of job opportunities elsewhere forces people into the relatively free entry and monopolistically competitive commerce (and in particular into retail commerce of certain types of goods--especially food) and personal service sectors, would be expected to lead to an increase in the share of the active population found in those sectors and (if strong enough) to a decrease in the average incomes in these (with the decrease mitigated somewhat if the increasing number of competing units leads to a decrease in the elasticity of the "representative" demand curve for the services so that their prices could rise during the process).[2]

The commerce sector is of particular interest with respect to this question. Its share of active population has indeed increased over time. But the hypothesized decrease in incomes--the element more directly relevant to the question of whether such a large group of people has filtered into this sector that it must be interpreted as a safety valve income and employment sharing device--does not seem to receive statistical support, although it may be true that average

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[1] As indicated in Table 23, the 1964-70 period probably saw a rise in the share of people employed by others of about 1-2 percentage points; impressionistic evidence suggests that the share of paid workers in large establishments also rose.

[2] The national accounts imply that there has been an increase over time in the price of the commerce "service", but since this sector is so hard to work with statistically (see below), the conclusion is open to question; it seems about as likely that the opposite has happened.

wages and incomes in this sector have risen more slowly than in most other sectors.

The share of the active population engaged in commerce has risen substantially--from about 5% in 1951[1] (also the 1938 figure) to 7.71% in 1964 and to perhaps 9.4% in 1970.[2] But it is difficult, without more detailed data than available at present, to interpret this adequately. It seems reasonable to anticipate some increase in this share to be a response to the development of the economy, and in particular to the increasing degree of commercialization and trade as

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[1]The 1951 census did not permit an easy distinction of commerce, within the broader category of "commerce and finance." The former was almost 90% of the total in 1964 and we assumed it to be a little over 91% in 1951. In each case the ratio presented gives the relation to the active population who reported sector of activity.

[2]Assuming that commerce was the same share of commerce, restaurants and hotels (67.6%) as in 1964 (and assuming that the restaurants and hotels category of 1970 corresponds to the "servicios prestados al publico" category in 1964). Something of a cross-check is provided by the data on "salesmen" which should be fairly closely related to commerce. In 1964 this category included about 7.1% of the population which declared an occupation (after inclusion of a category listed in 1964 as "managers in commerce," which was so included in 1970 but which the 1964 census listed in a different category); in 1970 (see Encuesta de Hogares, p. 10) "comerciantes y vendedores" accounted for 10.3% of those reporting incomes, and perhaps about 9.6% of the labor force (the share of employed who are family helpers is less in commerce than on average). It seems possible that the 1970 category referred to here is broader than that of 1964, so the increase may be overestimated.

a higher share of goods produced enters commercial channels.[1] The goods whose commercialization is in some sense the most complex are agricultural items; as of 1954 almost one half of the people occupied in the commercial sector were involved with these; with the increasing urbanization of the population it might be argued that it is not necessarily inefficient for an increasing share of the total population to be engaged, for example, in this type of commerce.

It is of more interest to consider changes in the share of commerce in the urban labor force than in the total labor force. A best guess would be that commerce rose from 10.1 to 12.7% of the urban labor force between 1951 and 1964.[2] For the broader category commerce, restaurants and hotels, an increase from 18-19% to 20.3 between 1964 and 1970 seems

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[1] Eventually, of course, an increasing share of output is in the form of services which may not go through commercial channels; but the stage has probably not yet been reached in Colombia where this factor outweighs the other (increasing commercialization of goods). The percent of the active population engaged in commerce in rural areas (or, in terms of the Colombian censuses, "other localities") is usually very small--1 to 2% or even less. In cities and towns the share appears to range from 8 or 9% up. While this does not necessarily mean that one should mechanically project an increase in the share of active population in commerce as urbanization proceeds, such a phenomenon does appear to occur in countries where the prevalence of surplus labor is much less obvious than in Colombia.

[2] There is uncertainty due to the failure of the census of 1964 to break this information down on a rural/urban basis.

probable.[1] If these figures are reasonably accurate increases have undoubtedly occurred, though rather gradual ones.

Over time, an increasing share of workers has been found in large commerce establishments[2] (see Table 24).

Table 25 brings together most of the available information of direct help in the estimation of changes in wages and incomes in this sector over time. While the data is inconclusive (see the discussion under "methodology")it seems unlikely that, on average, wage earners in commerce have suffered a decrease in real wages[3] over any extend

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[1]Looking at the problem this way, it is interesting to notice the generally positive relationship between the share of the population engaged in commerce and the size of the city. It would be useful to compare cities of a given size in 1951 and their commerce ratios with cities of the same size in 1964 and vice versa; such an exercise has not yet, to my knowledge, been performed.

The 1970 Encuesta de Hogares indicates that 20.31% of occupied persons stating occupational positions were in this category. The share of the labor force would probably be about the same if, as new figures suggest for that year, unemployment was at about the same level in this sector as for the economy as a whole.

[2]This phenomenon, documented much more fully in the manufacturing sector, led there to a substantial increase in the paid labor share between 1950 and 1967--the national accounts estimates are 27.5 for 1950 and 38.9 percent for 1967. In commerce, an increase from 18.3 (assuming that national accounts figure for 1950 was correct) to about 23.3 percent is plausible (the figure implicit if one uses the commerce census estimate of paid labor income and the national accounts estimate of value added).

[3]It is frequently pointed out, based on the national accounts statistics, that average income per person involved in commerce has fallen over time. This conclusion is unwarranted; the methodology underlying the calculation of value added in the commerce sector is, inevitably, one of the weakest in the national accounts procedure; other evidence (see text) suggests an increase in average wages.

Table 25

## Annual Earnings of People Employed in Commerce
(Data in 1958 Pesos)

| Year | National Accounts: Implicit Wage (1) | National Accounts: Implicit Average Income (2) | Commerce Censuses: Annual Wage: Establishments, (3) | Establishments with <5 workers (4) | Food Beverage Stores with Sales of <100,000 Year 1967 pesos) (5) | CIDE Unemployment Survey: Average Income (8 Cities) Unadjusted (6) | Increased 20% (7) | Average Wage: Food and beverage Retailing Cali-Valle[1] Retail (8) | Wholesale (9) |
|---|---|---|---|---|---|---|---|---|---|
| 1951 | 4928 | 9020 | | | | | | | |
| 1954 | 4529 | 9126 | 4463 | 1900-2,700 | 1070 | | | 2394 (all Valle) | 5043 |
| 1964 | 4446 | 9226 | | | | | | | |
| 1967 | 4173 | 9166 | (adjusted) 5100[1] | 2,900 | 1080 | 5930 | 7116 | | |
| 1969 | | | | | | | | 5826 (Nov. 1969) (Cali) | |

| Year | Wage Bill Data: National Accounts | Census of Commerce |
|---|---|---|
| 1954 | 266.1 | 253.0 |
| 1967 | 1965.6 | 2527.5[2] |

[1] The figure implicit in the census itself is 5324, but since a number of small establishments were missed in the census, a downward adjustment was effected to allow for this. Only about 6% of paid workers were probably missed.

[2] Implies a paid labor share of 23.3% in 1967, assuming the commerce census was complete; but in fact the wage bill figure should probably be about 2490 so if the value added figure was accurate, the paid wage share could be a little higher. Accuracy of the value added figure is, of course, open to doubt. A cross check with the 1967 commerce census suggests, however, that it is about right. Gross value added before subtraction of purchases other than goods to be sold would be about 11,032 million if the value added per person missed in the commerce census were one half that of the smallest size category of establishments reported. The national accounts figure of 10,845.6 would be consistent with this assuming small purchases of "other inputs." Since sales were probably downward biased somewhat in the commerce census, it seems plausible that a reasonable level of other purchases would be consistent with the national accounts figures.

ble 25, continued

thodology: Columns 1 and 2 are based on national accounts estimates of value added [illegible] ctor cost and remuneration of labor in the commerce sector in the selected years, together th population census estimates for 1951 and 1964 and the commerce census estimate for 1954 the number of people engaged in commerce. The national accounts estimates of both value ded and payments to labor are, as indicated elsewhere, somewhat arbitrary and elements the methodology suggest a possible downward bias in the post 1954 period; (the national counts estimate of paid labor income for 1954 is that of the commerce census). Slighton, ferring to the question of change in income (value added) per worker in commerce over re refers to an "observed 20% decrease in real income per paid employee between 1951 and 54" but doubts that the phenomenon really occurred, hypothesizing that the initial wage vel (1951) may have been overestimated. I would agree with Slighton (op. cit) that the 51 national accounts figure may be overestimated, although there is independent evidence rom Udall) that a decrease in average commerce incomes may have occurred between 1951 and 54. In any case, the chan e that an average wage decrease occurred between 1954 and 67 are almost nil, and between 1951 and 1967 quite small. The only possible methodological ror, it seems to me, which could reverse this conclusion would be if the 1967 sample rocedure had an upward bias in terms of the unrepresentativeness of the municipios osen. I have not been able to study the methodology in sufficient detail to deduce extent to which this might be the case, but I doubt it could account for a very rge percentage error.

e data of columns (3)-(5) are from the commerce censuses, for 1954, DANE, Censo Nacional Comercio y Servicios - 1954, Bogota, 1957; and for 1967, DANE, Muestra de Comercio Interior, 7, Bogota, November 1970. An Adjustment was made to the 1967 average wage figure, as dicated in footnote 1.

lumns (6) and (7) are based on the data in CEDE, Encuestas Urbanas de Empleo y Desempleo, ndice Estadistica, July 1968.

e Columns (8) and (9), the 1954 data again comes from the commerce census, and the 1969 ta is derived from tables in Harold Riley, et al, Market Coordination in the Development the Cauca Valley Region - Colombia, Latin American Studies Center, Michigan State University, search Report #5, East Lansing, 1970.

e 1954 data refers to all of the department of Valle and the 1969 data only to Cali, sug- sting an upward bias in the latter relative to the former. Here, however, the increase dicated is so substantial as to suggest strongly that a real increase occurred.

period;[1] while there is somewhat less information, it seems almost as doubtful that self-employed workers have lost; a best guess would be that they have gained about as much as paid workers.[2]

It would be possible, of course, for an increasing "labor surplus" to be funneled into small scale commerce without average earnings or wages in the sector as a whole falling, provided that a modern sector had rapidly increasing average earnings. (A pattern rather similar to this has been occurring in agriculture.) A comparison of the 1954 and 1967 commerce census information permits some evaluation of this hypothesis; it suggests that for some sizes of establishments real wages may have fallen between these years and that part of the increase in average wages was due to the shift of the size structure towards larger firms. Preliminary calculations suggest that average wages were lower in 1967 than in 1954 for medium sized estab-

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[1]The conclusion is lent further support by a series of real wages in commerce in Bogota developed by Alan Udall for his Yale Ph.D. thesis on the Bogota labor market. Udall has concluded that employees in larger commerce establishments had a substantial increase in average wages over the 1954-64 period; this conclusion was based on wages offered in classified ads. The movement of the series he developed was much like that of the DANE series for large firms; there was little change in the early 50s, but in the late 50s the increase began. Udall has also concluded that tienda operators had a large increase in real income between 1936 and 1954.

[2]The national accounts figures suggest no change in the average income of people in commerce (see Table 25). But since the national accounts estimating technique comes from the output side (basically assuming constant commerce margins for various categories of traded goods), this is weak information.

The CEDE unemployment survey indicated a 1967 average income in commerce of only about 6,000 pesos, but commerce is a sector in which understatement of incomes is notorious, and the same surveys usually imply understatement in all sectors.

lishments of perhaps 5 to 30 or 40 workers; but they suggest an increase in wages in the smallest establishments (although the apparently lower completeness of the 1967 census may have biased the 1967 wage up substantially in this category). For the interesting "food and beverages" category, where it might be hypothesized that the excess labor has increasingly concentrated, there appears to have been a striking increase in average wages since 1954. Considering establishments whose sales were under 100,000 1967 pesos, average wage in 1954 was perhaps 2,800 1967 pesos and in 1967 perhaps 4,400 pesos, i.e. 55-60% higher in the latter year.[1] It is interesting to observe that this increase is substantially above that for all paid workers in commerce and is also in the neighborhood of the real wage increase achieved by another low-skilled urban group over this period--the unskilled construction worker. It would suggest a decreasing dispersion of labor incomes in commerce over the period in question. As of 1967 the CEDE survey of unemployment in eight cities suggested a substantial

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[1] The average wage in the bottom two categories of the 1954 census was 2,560 pesos (of 1967) but the upper limit for sales was 92,000 1967 pesos rather than 100,000, so an upward adjustment to the average wage is appropriate; 2,800 is clearly an upward biased "limit" figure. In 1967 the recorded wage for establishments with sales up to 100,000 pesos was 4,950 pesos. If one assumed that a full 40,000 of the about 85,000 commerce workers which the 1967 census missed were in this category and that 3% of them were paid (the figure for the reporting establishments in this category was 4.2%) and that their salary was only one-half that of the reporting firms--probably downward biased--the corrected average wage is about 4,400 pesos.

Some confidence in the fact that the two sets of firms are of similar characteristics is provided by the fact that the bottom two categories in 1954 had a paid worker/all worker ratio of 4.24, almost identical to that of the bottom category in 1967 (4.2%). The number of establishments in the categories of interest in 1954 was 56,395 and in 1967 it was 87,402.

dispersion of incomes in commerce (incomes of all earners, not just paid workers) but one which was not in general any more severe than that in the other sectors.[1]

There is a small possibility that, even though the post-War period as a whole has seen increases in average incomes in commerce, and especially in the lower deciles of the income distribution generated in commerce, a worsening has been occurring in the last few years; some figures suggest higher shares of the urban population involved in commerce and as sales staff in the last 4 or 5 years.[2] My best

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[1]Thus in Bogota in 1967 the mean income from commerce was about equal to that of the other sectors, but a smaller percentage of earners (36.5) had an income less than one-half the mean than for all sectors (48.9%); about the same percent (25) had incomes below half the respective medians. Barranquilla, with a higher share of the occupied labor force in commerce (22.5 to Bogota's 18.6) had quite similar distributions (in the above respects) for commerce and non-commerce.

[2]Seven cities for which data were aggregated by DANE (see DANE, Subempleo en Siete Principales Ciudades del Pais, Bogota, 1969) i.e., Bogota, Medellin, Cali, Barranquilla, Manizales, Cartagena, and Bucaramanga, indicated that in 1964 15.74% of the labor force were in commerce, while the CEDE 8-city study of 1967 (the cities were Bogota, Medellin, Cali, Barranquilla, Manizales, Bucaramanga, Ibaque and Popayan) indicated that 19.8% of the labor force were in this sector. The sets of cities are almost identical (the differences being only with respect to small cities) so if the sample frames were similar, it would strongly suggest some increase in the share of people involved in commerce. In Bogota (Distrito Especial, of which over 90% of the active population are in the cabacera of Bogota) 9.15% of the labor force were sales staff in 1964; the CEDE study indicated 13.75% in 1967 and DANE's latest survey indicated about 14.5% in 1970 (though a definitional ambiguity makes it unclear whether the category is comparable to that of the earlier years).

The 1970 household survey of DANE, while it does not present separate data for commerce and thus makes it necessary to some extent to guess what the commerce share of the labor force was, could hardly be consistent with a figure above 15% This suggests in turn either that the CEDE methodology was somehow different from that of the 1964 census, so that the above comparison of the 1964 and 1967 figures is biased, or that the share of commerce did expand during that three year period--during which unemployment rates were quite high--and then fell again subsequently.

estimates of the share of the urban labor force in commerce, based on attempts to make the various sources consistent are: 1951, 10.1%; 1964, 12.7%; 1970, 14.2%. The data undoubtedly suggest an increase, but not so dramatic a one as to lead to the hypothesis that incomes or wages in the sector would have been falling. Parallel estimates of income and wage changes over the last 3-4 years are not available at present.

The percent of the active population engaged in commerce was hardly overwhelming in 1964;[1] in particular in retail commerce it was only perhaps 6.4% even after substantial increases in the preceding years; even if it has increased to say 8% since then, the possibility that perhaps one-third of these people are redundant is not an earth-shaking one. The same is true, in general, for those personal services about which it might be claimed that they simply represent surplus labor. Among the categories of interest are: individuals engaged in protection (mostly protecting private houses)--about 1.4% of the total active population, and over 2% of the urban active population; porters, elevator operators, and so on--less than 1/3 of 1%; military, a little less than 1%; and between 2 and 3% who did not declare any occupation

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[1] All commerce provided about 7.7% of employment (more precisely of the labor force) and if the share of retail commerce--82.5% in 1954--had not changed much over time, thus would imply about 6.4% there. By 1967, the retail/total ratio had probably risen to about 86% (the official figures indicated 84.2% but the share of missed persons in commerce was probably greater than this), implying that persons in retail might have accounted for say 6.5% of the total labor force in 1964.

or whose occupations were not identifiable; if the census caught them at all, this would presumably include thieves, prostitutes, etc. It is clear, in the light of these figures, that if one is to argue that there is a great deal of excess labor in the system, or has been a significant increase over the last couple of decades, he must also argue that it is relatively widespread in terms of the sectors and occupations affected. This possibility must be taken seriously and deserves much more analysis.

Career Employment Patterns

Information on the extent to which people switch sectors at various times in their occupational careers would be relevant to various interpretations of the nature of employment problems. Certainly there are some sectors of relatively free entry, in particular certain types of services; there are probably substantial immobilities into and out of others. The fact that unemployment tends to be relatively low in commerce and services, and was in transportation for at least part of the period 1963-66[1] would be consistent with the hypothesis that the possibility of the switch to independent worker status keeps the unemployment rate down in those sectors.

A different check on the nature and extent of the adjustment to employment difficulties could be effected with information on the changing occupational structure of a given cohort over time. Unfortunately the information available is too gross to yield much fruit

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[1] Slighton, op.cit, p. 27.

along these lines; net shifts over time can be calculated, but it is impossible to deduce the gross number who are moving "up" the occupational ladder or the number moving down, or moving from unemployment into a lower occupation than they had anticipated. Nevertheless a quick review is warranted; in diagrams 4 and 5 the occupational and sectoral distributions of the active population are presented for 1951 and 1964, according to age in 1951 (the data are presented in Tables A-5a and A-5b). Among occupations, it appears that, for males, the percent of a cohort who are employers increases until the age of perhaps 40[1] (see Diagram 4a); in this (and in several other cases) there is a complexity of interpretation related to the fact that over time the share of agriculture, where a large percent are employers, has been falling; it is possible that intra-sectorally the "employer share" would continue to rise longer than this or would have a different pattern than the one which emerges here. The share of males who are independent workers appears to rise continuously from only around 10 percent in the age group 15-25 to 35-40 percent in the group 55-64; over the 1951-64 period the share was growing for

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[1]The analysis is carried out in terms of percent distribution of the population in the various categories. Since people enter and leave the labor force over time, a changing percent for a given category does not necessarily imply that anyone has shifted--it could theoretically (at least in some cases) be accounted for by the movements into and out of the labor force. This problem is of importance for young and old cohorts--less so for middle aged ones, especially for men. Information does not permit more precise analysis than that done here, so this qualification should be borne in mind in reading the text.

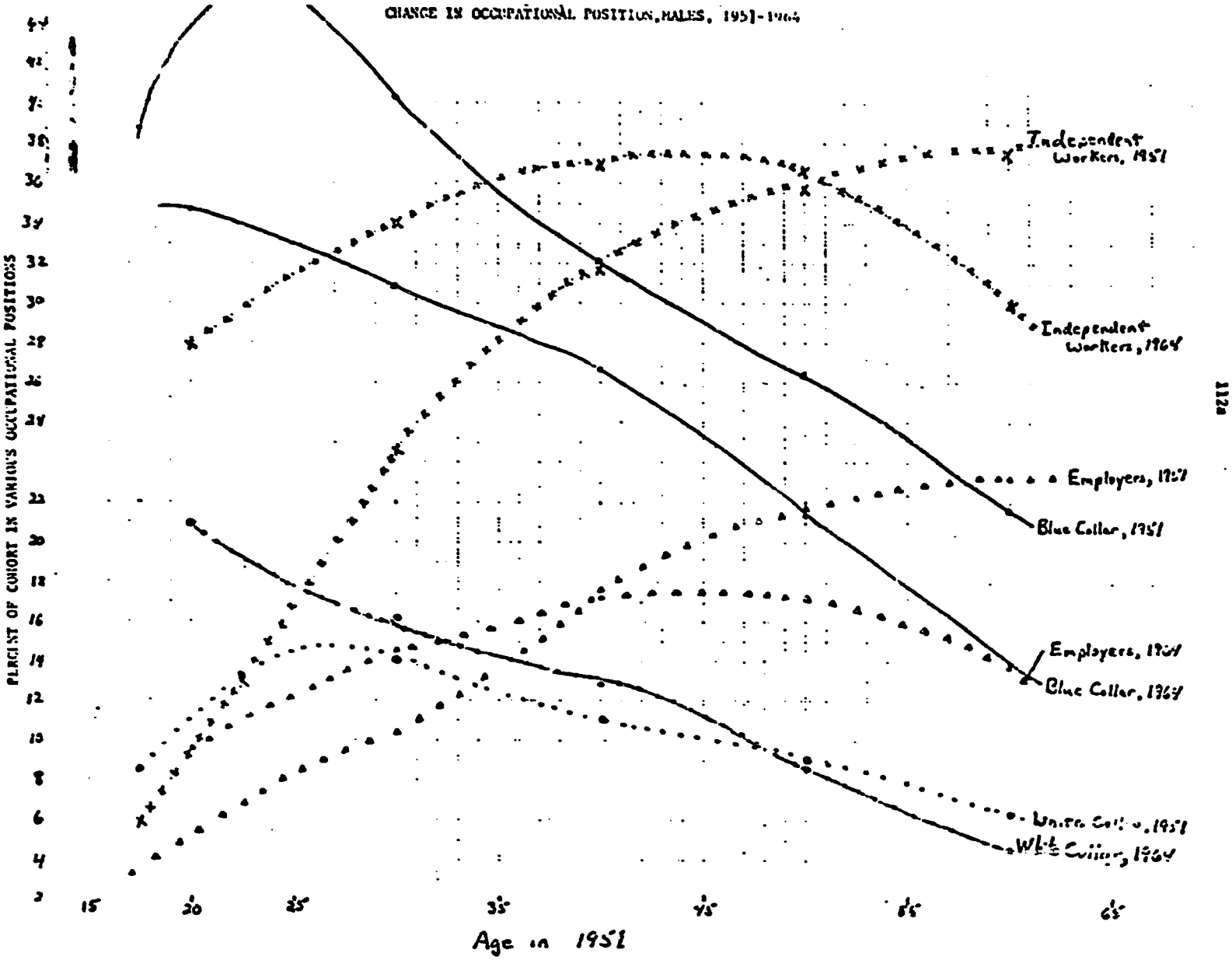
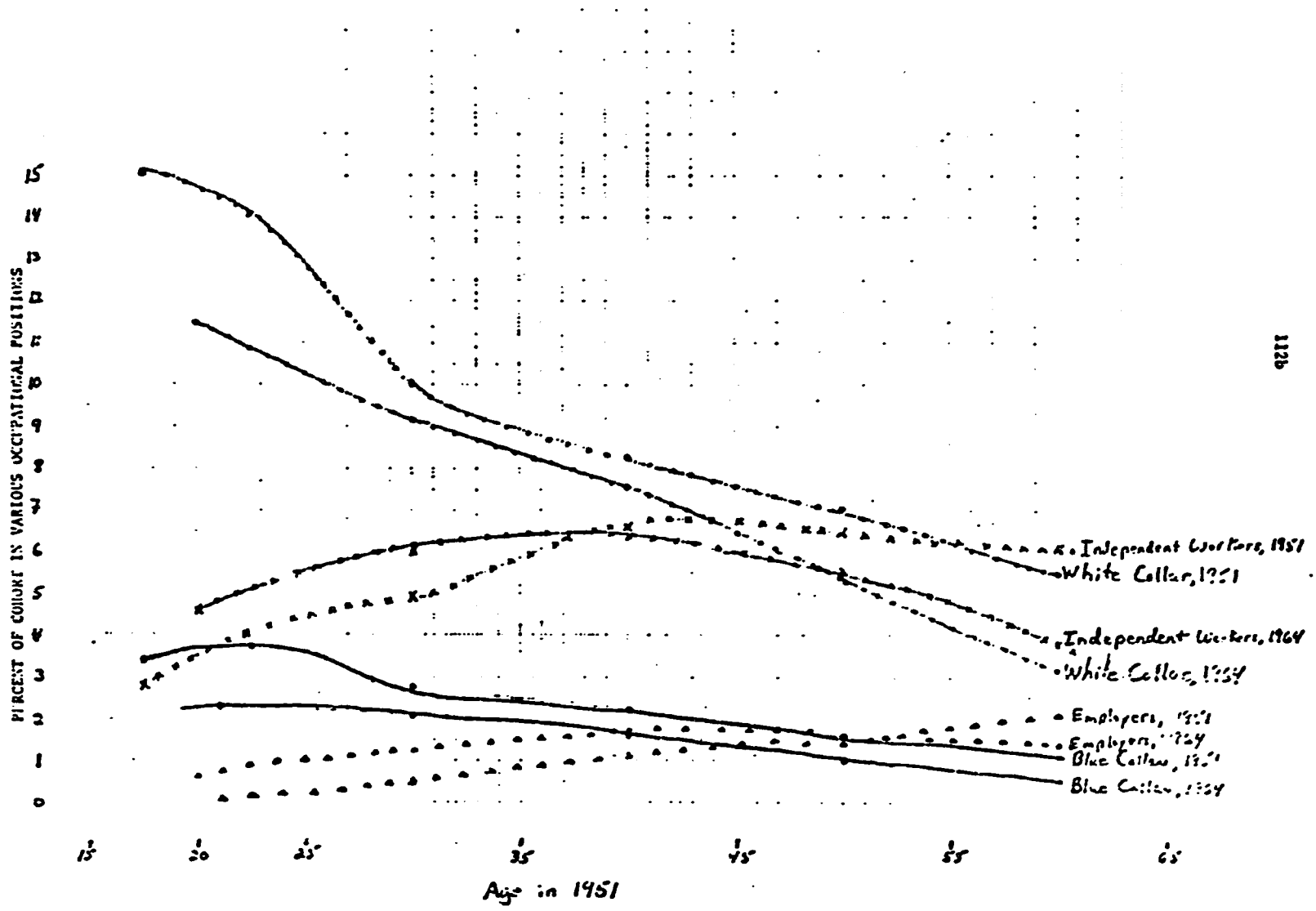


DIAGRAM 4b

CHANGE IN OCCUPATIONAL POSITION, FEMALES, 1951-1964




112b

people up to about age 50. The percent who are family helpers decreases quickly so that by the cohort 25-34 it is unimportant. The figures suggest an increase in the percent of people in the white collar category, though heavily concentrated in the first 10 or 15 years of job experience; further increase after this appears to be quite limited; a similar but reverse phenomenon holds in the case of blue collar workers, where a substantial percent shift out of the category occurs over perhaps 20 or 25 years of working life; afterwards the percent remains quite stable. The increase in white collar share for young cohorts is not significant enough to imply inequivocally that people moved from other categories to this one--the alternative explanation is that mortality of people in this category was less than for others (taken as a whole). The decrease in the blue collar category is large enough so that it could not be due to this phenomenon. In short, despite difficulties of interpretation it is clear that over time people move out of family helper and blue collar status into employer, independent worker and possibly white collar occupations. Over the 13 year intercensal period discussed here, for people 25-35 years in 1951 12-14% of the population made such shifts (net of any movements in the opposite direction). For people 35-45 in 1951 the shift was around 7 percent. Unfortunately the inability to treat agriculture separately leaves us almost without hypotheses for the non-agricultural sector, since these shifts are sure to happen in family farm agriculture. Low mobility into white collar pursuits is indicated clearly; it will require more detailed information to draw out

the meaning of the shifts among the other categories.

Over time patterns are similar for women except for the general tendency to leave the labor force at all ages; net departures from both white and blue collar categories occur throughout, the former involving maids, personal service, etc. With the retirement phenomenon so prominent it is not possible to deduce much about transfers between categories.

Intersectoral movements are somewhat harder to identify, being less marked; this suggests that much of the change over time in occupational categories occurs within sectors. But the evidence does show some interesting shifts (see Diagram 5). The important losing sector for men is agriculture - especially for people under 25, although some noticeable shifting out appeared still to go on at all ages;[1] for several sectors there is a tendency for younger people to transfer in and older people to transfer out, e.g. manufacturing with a net shift in for men up to about 35 or so and out after that age, and construction with a dividing age of about 45. Commerce, consistent with considerable impressionistic evidence is a sector to which people of almost all ages move; over the thirteen year intercensal period, 2-5% of the various cohorts up to age 50 made this shift-more for the younger cohorts. Services presented a similar tendency though focussed on certain age ranges, the 15-25 group (in 1951, i.e. a group which shifted when in the age range of, say, 20-30) and the 30-45 group.

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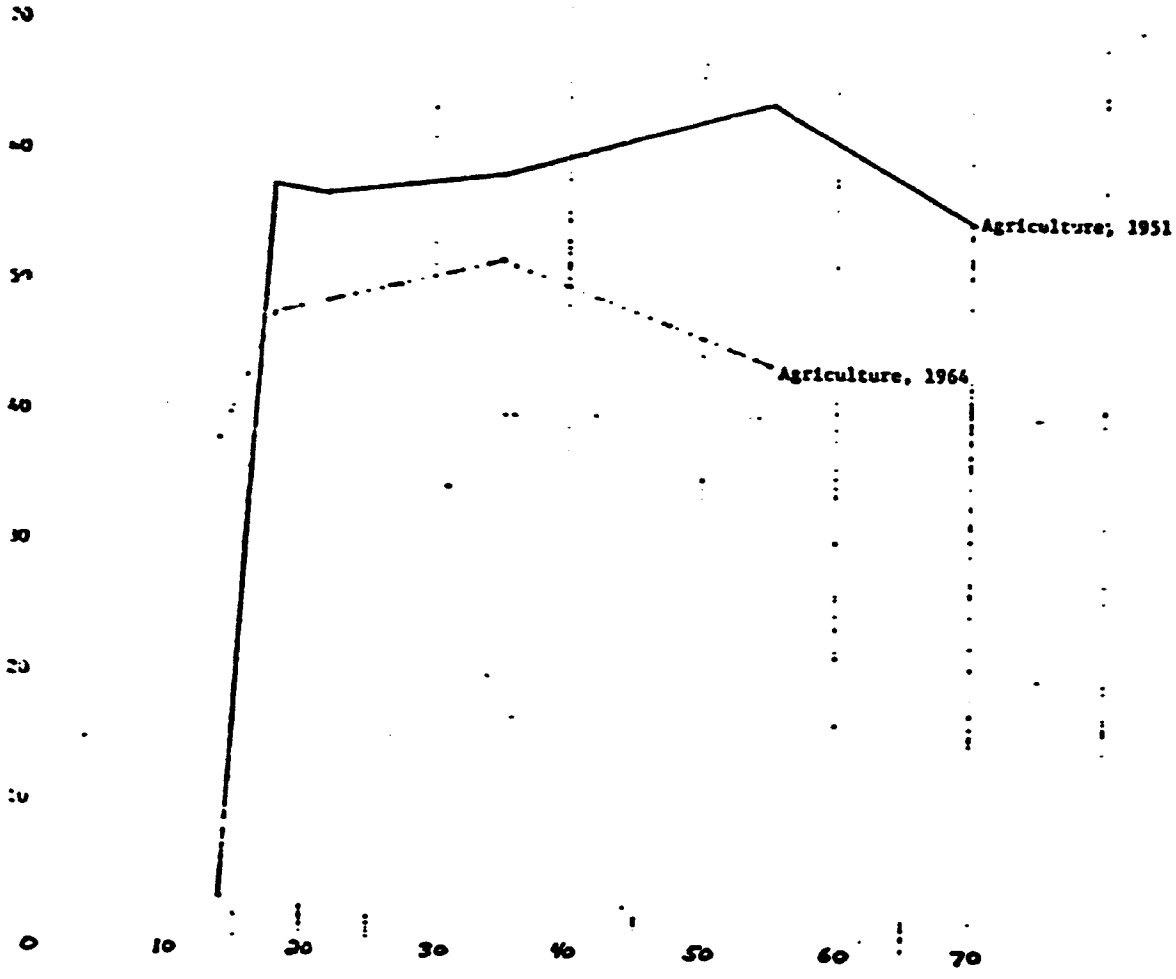
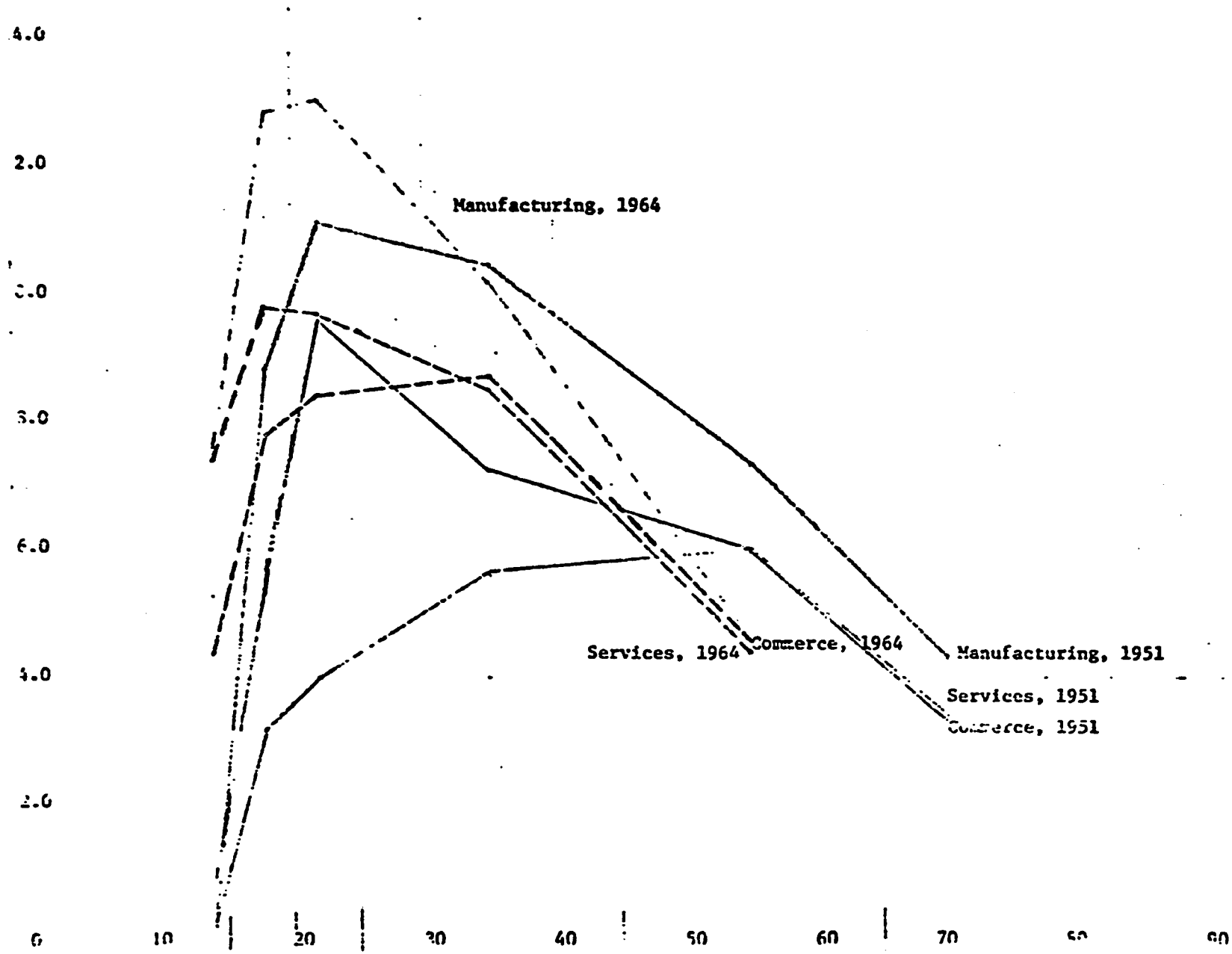
[1]Though at the highest categories retirement and death were playing a role.

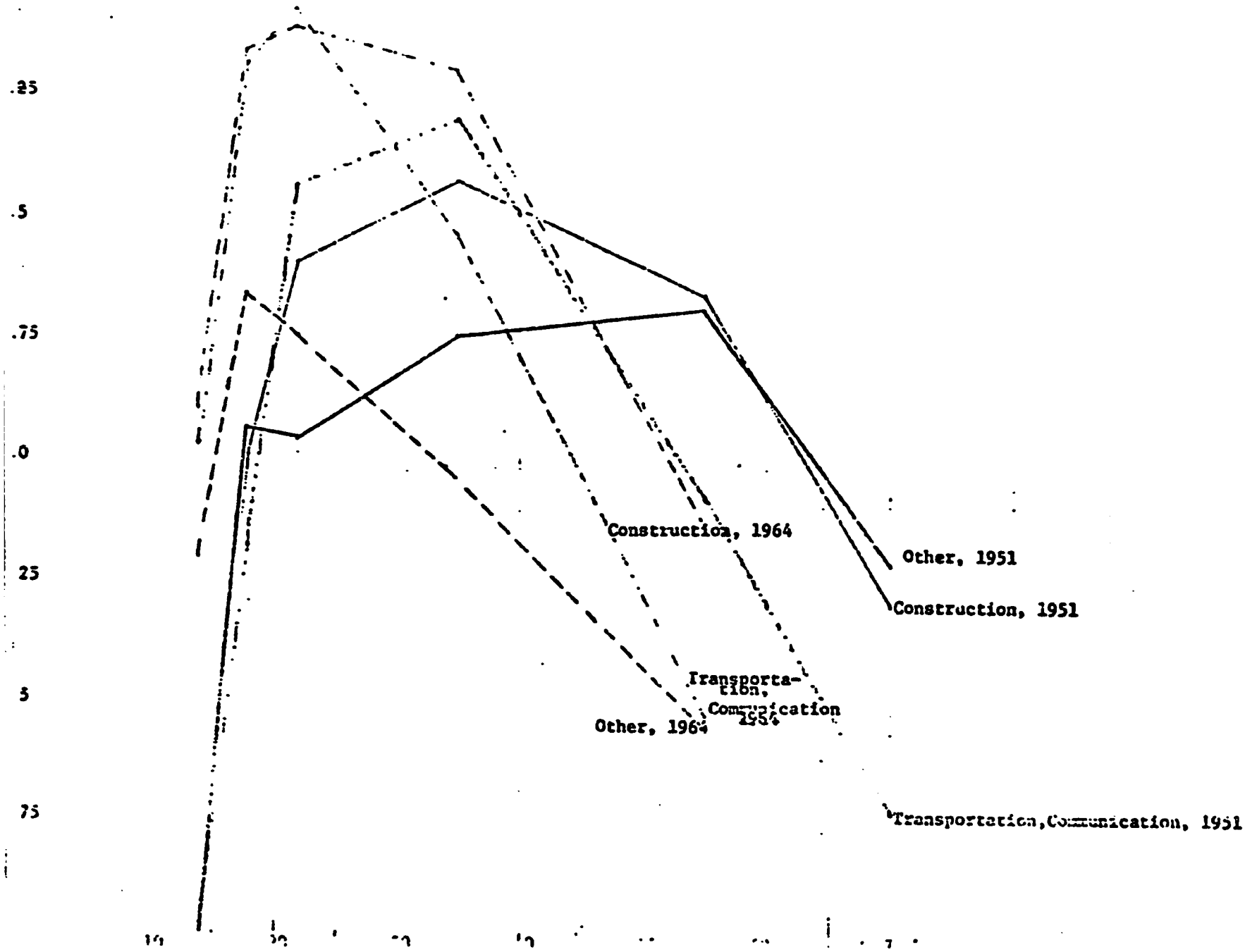
DIAGRAM 3

Over Time Sectional Shifts of Specific Cohorts: Male Labor Force

1951 - 1964






.25
.5
.75
.0
25
5
75
Construction, 1964
Other, 1951
Construction, 1951
Transporta-
tion,
Communication
1954
Other, 1964
Transportation, Communication, 1951

For women, it is harder to draw conclusions since a much smaller share are in the labor force, so no attempt is made here to isolate patterns of shifting.

Direct evidence on mobility patterns over time is very limited; it would be a useful cross check on the meaning of stated aspirations of people in the unemployed pool. The only study avaibable on this to my knowledge is that of Carlos Garcia.[1]

This study suggested (see Table A-16) a tendency for people's occupational category - and presumably income - to increase between first job held and last one held before the sample. Despite the broadness of category and overlap of income range for the different categories which prevent firm conclusions on the relative upward and downward tendencies, given original occupation, the evidence is much more consistent with rather substantial net upward occupational mobility over the career than the opposite; it is clear that people who started as agricultural workers or unspecialized manufacturing workers tended to improve their situation over time . One difficulty related to how the category"salesmen, etc." should be interpreted, people move into this category from most others and out of it to most others. Some observers have argued that income levels in this category are below those, for example, of successful manufacturing workers; there is no empirical evidence to support this hypothesis or the idea that people move "downward" into commerce. But it does remain a possibility and, as such, weakens the guesses as to the share of workers beginning in a given occupational category who move up (Table A-16). If (a) movements between low level office workers, own account businessmen, salesmen and skilled blue collar workers are neglected on the

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[1]Carlos Garcia, Mobilidad Ocupacional, CEDE, Universidad de Los Andes, Bogota, Septiembre, 1968.

grounds that it is not meaningful to rank these categories by probable income (and correspondingly, by probable direction of change of income with the move from one to another), that (b) (at a lower level) unspecialized blue collar and rural workers cannot be distinguished, nor can rural workers and own businessmen-salesmen, and that (c) the case of directors, etc. moving to own business can also not be taken as a worsening; then it is clear that the great majority of the fairly clear cut directional changes are upward, 118 such shifts being encountered here as opposed to only 17 fairly clear downward shifts. A little over one quarter of the active labor force had had fairly definite upward shifts. Again, this is very circumstantial evidence because of the large presumed overlaps in the income ranges of the different categories; but it does seem clear that the evidence cannot support the argument that there is substantial downward mobility. It would seem much more consistent with substantial upward movement.[1]

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[1]Garcia noted that about the same share of people who started as manual workers were non-manual (17%) at the time of the sample as the percent which started in non-manual categories and moved to manual ones (15%); the uncertainty of the meaning of switching from manual to the selling category (defined by him as non-manual) and vice versa throws much doubt on the meaning of the comparison.

## IV. Summary Comments on the Social Cost of Unemployment and Low Participation Rates

While a theme emphasized above is that many of the unemployed are relatively well off compared to many employed people, this is not, of course, to say that all unemployment falls in this category. Of previous job holders, a high share are looking for work in the "craftsman" area and possibly up to 50% are looking for blue collar or domestic service jobs. (See Table A-2). The nature of this component of unemployment may be quite different from the first type in its relation to various economic and other factors, its cyclical and secular movements, and so on. Some people, presumably, are on the margin between the two areas -- they look for white collar jobs, but if unsuccessful long enough, accept blue collar jobs and may subsequently remain in that pool. Some time series information on unemployment rates by sector and by occupation is presented in Tables 27 and 28; (unfortunately, we do not have complete information by cell, i.e. cross-classifying for occupation and sector). These figures refer only to the unemployment rate of people who have previously had jobs. In most categories, they tend to be dominated by the male rates. It is interesting to observe that the unemployment rate for office workers seems consistently to be the highest of the white collar categories, while "manual workers" is the highest of all; but this latter category is a very small and ill defined one (in 1967 it accounted for only 2.7 % of the labor force). Unfortunately, the category artisans/operators probably spans a wide range of skill levels and therefore does not permit a zeroing in on the unemployment rates of particular low skill and low income groups.

Table 27

"PREVIOUS WORKER" UNEMPLOYMENT RATES BY SECTOR[a]:
(percent)

| Period of Sample | Sector | | | | | |
|---|---|---|---|---|---|---|
| | Manufacturing | Construction | Commerce | Transport | Service | Government |
| | | | Urban Colombia | | | |
| 1970 | 10.39 | 15.06 | 10.64[d] | 5.33 | 8.06[d] | |
| | | | Bogota | | | |
| April 1967 | 17.75 | 24.90 | 16.96 | 15.36 | 9.57 | 13.92 |
| March 1966 | 9.6 | 12.9 | 5.6 | 10.7 | 4.4 | 4.8 |
| Dec. 1965 | 3.8 | 8.5 | 6.3 | 9.1 | 3.4 | 3.5 |
| Sept. 1965 | 6.7 | 15.8 | 6.6 | 9.1 | 3.5 | 4.8 |
| June 1965 | 7.4 | 13.0 | 3.3 | 3.8 | 5.8 | 2.9 |
| March 1965 | 6.3 | 17.2 | 3.6 | 5.3 | 4.2 | -- |
| Dec. 1964 | 5.3 | 20.5 | 5.0 | 4.6 | 2.2 | 7.4 |
| Sept. 1964 | 6.9 | 11.6 | 3.0 | 8.0 | 1.7 | 5.6 |
| June 1964 | 5.2 | 6.8 | 3.2 | 4.9 | 2.0 | 4.5 |
| Dec. 1963 | 7.4 | 10.4 | 4.2 | 1.1 | 2.6 | 2.9 |
| Sept. 1963 | 5.7 | 13.8 | 2.6 | 1.4 | 3.4 | 6.3 |
| June 1963 | 7.4 | 9.4 | 4.3 | 4.4 | 4.1 | 3.1 |
| March 1963 | 7.8 | 9.6 | 3.7 | 3.9 | 3.3 | 8.7 |
| | | | Eight Cities--Weighted Average | | | |
| | 16.00 | 26.49 | 15.24 | 13.85 | 10.87 | 13.24 |
| | | | Cali | | | |
| March 1965 | 11.6 | 22.1 | 3.9 | 15.4 | 5.8 | 7.9 |

[a]'s 1970 Encuesta de Hogares lumped people in commerce, restaurants and motels together
hat division between commerce and services is different in this source from the others used
, where people working in restaurants and motels were included in the service sector. The
unemployment rates are presented in DANE, Boletin Mensual de Estadistica No. 239, page 63.

Table 27 continued:

Sources and Methodology: Figures for the period March 1963 through March 1966 for Bogota come from Rafael Isaza, "Occupacion y Des_Ocupacion en Bogota:, Empleo y Desempleo en Colombia, CEDE, Universidad de Los Andes, Bogota, 1968, page 139. It appears that domestic servants are included in the service category; since their unemployment rate is typically quite low, they helped keep that of the category as a whole low.

The April 1967 figures are Bogota are based on Isaza and Ortega op. cit., Tables 15 and 24.

The eight city estimates for 1967 are based on data in ILO, op. cit., page 366 and the weighted average unemployment rate of 15.37 for those eight cities.

The Cali sample is reported in Centro de Investigaciones Economicas, Universidad del Valle, Empleo y Desempleo de la Mano de Obra en la Ciudad de Cali (Cali, 1965).

Table 28

"PREVIOUS WORKER" UNEMPLOYMENT RATES BY OCCUPATION
(Percent)

| Sample | Occupational Category | | | | | | |
|---|---|---|---|---|---|---|---|
| | Manager/ Professional | Office Workers | Sales Workers | Transport Workers | Artisans/ Operators | Manual Workers | Service Workers |
| **Eight Cities: 1967** | | | | | | | |
| 1967 | 4.46 | 13.09 | 7.41 | 11.26 | 12.92 | 10.15 | 7.12 |
| **Bogota** | | | | | | | |
| 1970 | | | | | | | |
| April 1967 | 4.50 | 14.2 | 6.24 | 13.24 | 12.49 | 10.96 | 6.34 |
| March 1966 | 7.4 | 14.1 | 12.3 | 12.3 | 10.9 | 18.5 | 4.6 |
| Dec. 1965 | 7.0 | 12.2 | 10.4 | 8.2 | 6.7 | 28.9 | 3.0 |
| Sept. 1965 | 7.4 | 10.8 | 10.9 | 9.6 | 11.5 | 30.8 | 4.4 |
| June 1965 | 6.7 | 16.4 | 10.8 | 1.4 | 10.7 | 17.2 | 2.4 |
| March 1965 | 3.4 | 13.4 | 8.2 | 5.6 | 11.1 | 28.2 | 6.6 |
| Sept. 1964 | 3.3 | 13.0 | 7.7 | 8.9 | 10.5 | 7.4 | 2.8 |
| June 1964 | 3.2 | 14.7 | 5.3 | 12.9 | 9.2 | 5.6 | 3.0 |
| March 1964 | 6.9 | 11.4 | 8.0 | 4.6 | 6.5 | -- | 4.3 |
| Dec. 1963 | 3.8 | 13.9 | 7.8 | 4.1 | 8.8 | 11.8 | 3.3 |
| Sept. 1963 | | | | | | | |
| June 1963 | | | | | | | |
| March 1963 | | | | | | | |
| March 1965 | 19.0 | 15.3 | 6.57 | 17.4 | 18.0 | 30.0 | 1.8 |

Source: Bogota samples: unpublished data, CEDE. Cali sample: Centro de Investigaciones Economicas, Universidad del Valle, Empleo y Desempleo de la Mano de Obra en la Ciudad de Cali (Cali, 1965).

Sources and Methodology: The Bogota estimates, 1963-1966 are, as in Table 27, from Teams, op. cit. The eight city estimates for 1967 were based on ILO, op. cit., pars 360 and 364 and the assumption that 2/3 of the labor force in the cities in question was male, a figure somewhat below the all urban figure for Colombia in 1964. This implied an overall previous worker unemployment rate of 10.145 for these eight cities in 1967.

The conclusion that unskilled workers do have particular employment difficulties is consistent, of course, with the very high unemployment rates for the sector construction; in Table A-8 the distribution of white collar and blue collar workers is presented by sector.

It may be argued that the social cost of unemployment reaches beyond the individuals and families directly affected, in that it may be a cause of crime and chaotic disruption. To my knowledge, no information is available on the extent to which property crimes are related to unemployment (as opposed, for example, to low income levels); the same goes for crimes against persons. Conceptually, robbery could provide a safety valve against low income and unemployment[1]; prostitution does provide one and begging another.[2] Since robbery is monopolistically competitive by nature, as is begging, these two occupations could conceivably encompass a substantial number of people. But in fact, they do not appear to.

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[1]Police and vigilante protection against property crimes provide another source of employment for the relatively poor.

[2]Though large income and consumption differences may create a climate for robbery, it seems unlikely that its practitioners would have particularly low alternative incomes. In the case of prostitution and begging they probably would. Studies have linked economic difficulties of the family to both phenomena, e.g. Arturo Calle Restrepo, Conflictos Familiares y Problemas Humanos, Madrid, Escuelas Profesionales "Sagrado Corazon", 1964; Saturnino Sepulveda Nino, La Prostitucion en Colombia, Bogota, Editorial Andes, 1970.

It seems plausible to suppose, in short, that unemployment has a number of important negative externalities whose consideration might lead one to a more negative appraisal of it relative to poverty per se.

V. Major Policy Issues Relating to Unemployment

It may be presumed that aggregate demand policy cannot help to resolve the unemployment problem in anything but the occasional short run period (though policy affecting the composition of demand may well be relevant). On the other hand, there is strong evidence that some part of unemployment might be alleviated by more effective use of the capital stock (i.e. smaller dispersion in capital/labor ratios, etc.) -- a distribution improving policy as well -- so this possibility must clearly be considered in detail, factor suitability in the various sectors be analyzed, etc. Little work has as yet been directed to this question in Colombia, though considerably more evidence is available when the experience of the LDC's as a whole is considered.[1] Although evidence demonstrates the possibility of a wide variety of factor proportions, it remains quite unclear how much the demand for labor in a given situation can be affected by the manipulation, for example, of factor prices. Factor proportions used in different production units in Colombia vary greatly, so if even all of the existing technologies are considered to be alternatives, the economy as a whole has a wide range of choice. It has been argued that some of these alternatives are and would not exist in the presence of perfect factor markets, but there seems to be adequate evidence that some labor intensive technologies could compete satisfactorily and even expand under perfect factor markets.[2]

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[1]See, for example, Jeffey Williamson, "Capital Accumulation, Labor Saving and Labor Absorption Once More", Quarterly Journal of Economics, Vol. LXXXV, February, 1971; Gustav Ranis, "Factor Proportions in Japanese Economic Development", American Economic Review, XLVII, Sept., 1957; Howard Pack, "Employment and Industrial Growth - Some Cross-Section Results: 1953-63", Mimeo.

[2](See next page)

[2]Although many statistical problems and difficulties of interpretation remain, it seems clear that within a given industrial sector - and sometimes for the same product or very close substitutes - the labor/capital ratio typically varies considerably across firm size. And, at least in some sectors, it appears that the small firms with higher labor/capital ratios are not dominated, i.e. they have higher output/capital ratios. In this connection, see John Todd, "Size of Firm and Efficiency in Colombian Manufacturing", Research Memorandum #41, Center for Development Economics, Williams College, Williamstown, Mass.; Albert Berry, "The Relevance and Prospects of Small Scale Industry in Colombia", Mimeo, 1971. These studies suggest that the capital/output ratio is substantially lower for highly capital intensive plants; it is very unlikely that the difference between that size category (there are some doubts as to which category it is) with the highest output/capital ratio and the largest plants is less than two to one. A similar phenomenon has been observed in Colombian agriculture. While other sectors have apparently not been studied in this light, it seems probable that the phenomenon is a rather general one.

Whether feasible manipulations of factor prices could have much short or long run impact on factor proportions is, nevertheless, open to question. Other studies have purported to get at the issues, but without success. One study carried out by Planeacion suggested that the elasticity of labor/capital substitution was high. (Departamento Nacional de Planeacion, "Breve Esquema sobre el Problema del Desempleo en Colombia," U.P.G., 022, Junio 30, 1970). This study found high elasticities of substitution in almost all two-digit sectors, but suffered from a methodological defect in that, in spite of its time series appraach, no attempt was made to "take out" technological change. As a result, what was probably primarily a gradual technological change, shifting the factor proportions towards capital intensity over time, was interpreted as a high elasticity of substitution (at a point of time). The Planeacion study was criticized subsequently by another group of researchers (Juan Felipe Gaviria, Francisco Javier Gomez, Hugo Lopez, "El Uso de las Funciones de Produccion en el Analisis del Desempleo" DANE Boletin Mensual de Estadistica, #236, Marzo, 1971, a study of the Centro de Investigaciones Economicas, Facultad de Ciencias Economicas, Universidad de Antioquia).

The planeacion methodology found an over time relationship between value added per person and a variable which should approximate the wage share, a relationship whose presence was probably due primarily to the time trend in both variables. The Antioquia study criticizes the Planeacion methodology on the grounds that, among other things, it assumed perfect competition, constant returns to scale, and that entrepreneurs would vary their factor proportions on a yearly basis; the latter assumption was justifiably panned. An alternative model permitting non-constant returns to scale and assuming that each sector acts like part of a profit maximizing firm in each period was proposed. The elasticities of substitution estimated were much lower; The $R^2$ were generally high in both cases, perhaps somewhat higher in the CIE study. (cont'd, p. 121)

Further, it is highly probable that serious governmental attempts to make available more information on labor intensive techniques from other countries -- countries like Japan -- would improve substantially the possibility of reducing the problem. Finally, it must be borne in mind that, if factor

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[2] (cont'd.) But the authors care, parenthetically, to the intriguing conclusion that, "...it is not possible to test economic hypotheses with statistical tools." On the contrary, only economic theory which determines rigorously the conditions which define each economic structure -- in our case the Colombian --capable of furnishing the valid criteria of different hypotheses.

prices were changed, the composition of output would change, and even if factor substitution were limited (in the majority of existing industries), this would not mean that it was limited for the economy as a whole.

The real problem in this context, however, is not "what would the demand for labor be had no past mistakes in the capital intensity of investment projects been made, and were the government and other institutions highly efficient in learning about and transmitting to the private sector information on labor intensive techniques used elsewhere?" The more practical questions are: (a) "How much would manipulation of factor prices affect the demand for labor given that much capital is now installed, a substantial learning process has been effected in the use of capital intensive techniques but (probably) less in the use of potentially productive labor intensive techniques, and the information apparatus of the private and public sectors in terms of labor intensive technological change is quite retarded?" and (b) What other policy steps could be taken to foster demand for labor and with what success? There are practical problems with respect to the manipulation of factor prices and improvement of factor markets, which might limit the extent of achievement possible; though it seems clear that policy should move in this direction to the extent feasible and consistent with other objectives, it remains very open to question how much will be achieved. It is, correspondingly, important to consider complementary steps such as extension services to aid in technological change and adaptation, etc.

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[1]The possible desirability of lowering the wage rate in certain sectors might suggest a conflict with income distribution policy. It is usually held that an equilibrium wage rate (as opposed to a protected wage in a favored

subsector and an equilibrium one in the rest of the system) would improve the distribution of income within the working class, but it is a question of definition whether it would improve the overall distribution. There is some dispute as to whether above equilibrium salaries really do worsen the distribution within the working class, one group maintaining that intra-family distribution between those with above equilibrium wages and those without tends to smooth off the differences. This proposition seems inapplicable to Colombia, even though it may have merit elsewhere.

## VI. Resolution of Unemployment Problems and Improved Distribution of Income

### . Competitive or Complementary?

The above discussion suggests that if all options are open and broad manipulative powers are available to the government, there should not be serious conflict between the goal of reducing at least some forms of unemployment, the goal of improving income distribution, and the goal of output growth. Labor intensive firms (high $L/K$) are almost by definition intensive in blue collar labor and usually in relatively unskilled (at least relatively low paid) labor. This being the case, increased emphasis on such firms and technologies should raise output (with given capital stock), improve distribution and raise the demand for low income labor. It seems probable that the packages of alternatives which are available to unconstrained policy makers would form a series of points like those plotted in Diagram 6. Under such conditions, only the points on the frontier are relevant, the rest being dominated. If, as suggested by the widespread evidence of current inefficiency of resource allocation, the economy is well inside even its static frontier, and many feasible output-employment combinations would imply an increase in both variables, it is in this sense that the trade-off between the two goals, as between feasible points C, D, and E, is not too great an issue; this is especially the case when uncertainty as to the effects of particular policy packages is allowed for;the possible results of a given package would be viewed as a probability distribution,(but with rather subjective probabilities).

Where policy is constrained, for example, by the absence of much flexibility in terms of choice of size structure, there may be trade-offs, so it may be of interest to consider their seriousness. Given real world technical and political difficulties in achieving optimal policy, it seems most likely that alternatives considered are well within the frontier; secondly, only a few of the feasible alternatives are likely to be considered and these are likely to include a range of points not all in the first quadrant, e.g. points like R, S, and T. The political and technical constraints are likely to imply the inevitability of consideration of rather extreme points. Possibly, all points considered will be dominated in terms of both objectives by many of the points on the frontier. When points like R, S, and T are the ones under consideration, there is an important goal trade-off choice to be made, and the detailed characteristics of the social welfare function are required to decide the issue. It seems, however, that from the economists' point of view, it may be most fruitful to emphasize the possible existence of points further out than any of those being considered, i.e. points which have both better employment and output characteristics. [1]

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[1] The characteristics of factor proportions and output/capital ratios across firm sizes, mentioned above, suggest strongly that such points as C, D, and E do exist; the first order of business would seem to locate them and relate policy to them, and a second order to consider possible trade-offs of optimal or near optimal (i.e. frontier) points.

The interpretation presented above of a substantial segment of Colombia's unemployment, which related it to a gap between aspirations and possibilities of many people with some secondary school or completed primary-people who aspire to jobs which would give them incomes in the top quarter or third of the distribution, does suggest the possibility of an inconsistency over the next decade or so between policies designed to improve the distribution of income and policies designed to alleviate the unemployment of this middle-class group of aspirants to white collar jobs and standards.

Just as different industries and sectors vary in terms of their capital labor ratios and the functional distribution of income between labor and capital which they generate, they also differ - and quite widely in some cases - in terms of the relative proportions of the relatively low-skilled blue collar labor and higher skilled and white collar labor. To the extent that unemployment is a middle-class or aspiring middle class phenomenon, and to the extent, as is possible, that the political power of this group is greater than that of the lower income workers (usually unorganized), it is not implausible to anticipate that, deliberately or not, there will be an increasing tendency to focus on the creation of jobs in the higher skilled and white collar categories, rather than the lower skilled categories. That would be a natural reaction to political pressure.[1]

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[1]This presumes a fairly refined reaction on the part of decision makers to pressures. It would probably not be a valid interpretation of the way Colombian decisionmaking currently takes place. To the extent that industrialization has gradually veered toward white collar and high skilled blue collar job creation, this has probably been a side effect of other forces - the fact that, of necessity, low skill industries evolved first, the relationship between capital intensive and high income labor intensity. But the increasing pluralism of the Colombian political system suggests that it could become possible in the future. A more direct reaction to the situation, and a continuing characteristic of the political system, is for these people to try to attain jobs in exchange for rendering services to a particular political faction. (This is a major thread in Payn's interpretation of the political process in Colombia. See James Payne, Patterns of Conflict in Colombia, New Haven, Yale University Press, 1968). The excess supply generates pressure to create non-economic demand for it in any sector where such featherbedding can be maintained. The low level of competition in some areas of the economy suggests that there probably is some of this in a number of sectors, though its quantitative magnitude is far from clear.

Leaving the upper income group aside for the moment, it is clear that such a policy, (while the broken aspirations of this group may in many cases be personal tragedies), would be a distribution-worsening one, since these people are far from the bottom of the distribution. Industries like chemicals and petro-chemicals (with 60 and 53% respectively of total labor income going to white collar employees and a considerable share of the rest to quite high income blue collar workers, especially in petro-chemicals) may not represent a conscious following of this policy, but it is interesting that they appear to be consistent with it. (These industries create very low blue collar worker shares.)

Contributing importantly to the problem just cited have been the relatively rapid expansion of secondary education, in large part reacting to heavy demand from the people (as reflected in the increasing share of students attending private schools) combined with the continuing antipathy to blue collar work as something demeaning, "lower class", and so on. If one treats the continued rapid expansion of secondary education and this cultural attribute as constants, Colombia's real comparative advantage will gradually shift away from hightly blue collar intensive sectors to sectors where higher skilled labor and white collar labor is a substitute for capital. Precisely what sectors these might be remains to be seen, but if development were forced into this mold, it seems probable that substantial growth potential would be lost in the process[1].

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[1] In fact, much experience from other countries (and a little in Colombia) suggests that attitudes toward different occupations are rather flexible, so that if unemployment remains a problem over a period of time, or excess supply in an occupation pushes incomes down, the attitudes will gradually -- perhaps even quickly -- change. If, before they have, however, they lead to policy measures being taken to increase the opportunities for the group in question, e.g. making its qualifications required for various types of jobs, then the forces which would otherwise have helped to erode the attitudes may be weakened; the attitudes may, in other words, be self-perpetuating.

The relationship of rural-urban migration to the unemployment question was discussed above. The Colombian experience seems consistent with an interpretation whereby that flow is self-regulatory and tends not to reach proportions such as to make it an important direct causal factor in unemployment.[1] As observed above, unemployment rates for immigrants to the city are lower than for native born, even after standardization for age - a striking phenomenon given the lower educational level (for a given age) for the immigrants. It remains possible that some part of the unemployment is related to excess competition provided by immigrants, but it seems unlikely that a high share of it could be explained that way. Overall our interpretation of unemployment tends to suggest that if rural-urban migration flows were to increase, while it would become more difficult to get a satisfactory job, the major manifestation of this would not be a high enemployment rate, but low incomes, flooding of some easy-entry sectors, and so on. The rural-urban migration issue is, in any case, complicated, and it is not yet clear what policy

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[1] It could hardly be denied that if the migratory flow gets out of line with the potential for relatively low skilled jobs in the city, it might lead to unemployment. But the evidence does not suggest this.

variable would affect this flow.[1] And many factors not yet quantified should go into the estimation of the optimal migration rate; among the important ones would be (a) the impact of the migration on the rate of population growth, (b) the relative ease and cost of educating people in urban, as opposed to rural, areas, (c) the relative externalities of a person in the two settings, (d) relative savings rates, and so on.

Perhaps the most promising avenue for policy designed to alleviate that extreme form of unemployment which is related with low incomes (and to alleviate the low incomes at the same time) lies in improved international trade policy. Evidence for this comes both from the international realm - where such countries as Korea and Taiwan have rapidly increased employment in the urban and industrial sectors via their dramatic export booms-and from general principles consistent with observation in Colombia, that the import substitution industries-especially those of the later import substitution period - are highly capital intensive, whereas some of the obviously export potential industries like wooden furniture, clothing, and so on tend to be labor intensive.[2]

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[1]The impact, for example, of expanded rural education seems confused; it increases the attractiveness of rural life, but may also encourage emigration by increasing ease of communications, aspirations, etc.

[2]In this connection, see Unidad de Integracion Economica, Departamento Nacional de Planeacion, Recomendaciones Concretas de Politica contra el Desempleo, Documento U.I. E. - 001, Febrero, 1971. This and other Planeacion documents have discussed a variety of possible policy measures, including subsidies to labor. It has been observed that since the elasticity of demand for labor is likely to approximate one in the public sector and in public works, it is particularly important to be careful in fixing public sector salaries. Another suggestion is to increase tax deductions for salary payment. Another is to restructure the CAT so that it will not discriminate against small firms.

The usual combination of stimuli for exports seems appropriate here, i.e a closer to equilibrium exchange rate, good credit facilities, and perhaps, especially, the provision of certain complementary services like information and improved commercialization, services particularly relevant to the small scale producer whose output is exported. It might be noted also that the chances of improving the "income-distribution-employment" situation would appear from some points of view to lie more in trade with the developed countries than with the less developed ones; this proposition is plausible both on theoretical and empirical grounds at present.[1] But the restrictions placed on this trade by the developed countries do constitute a barrier and both options should no doubt be pursued.

One interesting idea is that of creating large labor intensive firms. Given what we know of the relationship between capital intensity and size, this could be a difficult undertaking, but it would be worth considering the experience in Ecuador where a large furniture plant is being initiated with the express goal of exporting. The problems of the small scale exporter are well documented, so size, either at the producer or the commercialization

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[1]With respect to the latter, see the Study on Mexico by John Sheahan... and others. Comparative advantage with respect to the developed countries of an LDC seem particularly likely to be related to labor intensity, whereas in trade among less developed countries, this would, for any given country, be less likely, with such aspects as natural resources, the particular history of growth, and so on,becoming relatively more important.

level seems important. More understanding of why large firms are so consistently capital intensive is necessary; if this tendency is due largely to their functioning in protected markets, the export orientation could resolve a good part of the problem.

Another possible policy direction involves improvements in the efficiency of the functioning of the labor market. Many imperfections (e.g. those caused by unions, firms having monopsony power in the market, etc.) may be constants in the situation, but informational problems, lack of good advice, etc. may be more avoidable.

The evidence does suggest that most labor markets[1] function fairly well in the sense of generating wage rates reasonably close to the equilibrium level, and therefore clearing without too long delays. This seems to be the case in the unskilled labor market where minimum wage legislation and especially fringe benefit legislation has not been too widely applied. As between agricultural workers and urban construction workers,[2] there is usually a fairly small differential (20 to 40 per cent) part of which may be due to cost of living differences (although this is not clear) and the evidence suggests that the flow of rural to urban migration adjusts fairly quickly to keep this differential within reasonable bounds over time.

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[1] i.e. the markets in which most individuals find their jobs.

[2] Minimum wage legislation (and more importantly, the fringe benefits) is not generally applied in agriculture; the same is true in construction where a subcontracting system permits the avoidance of the fringe benefits. (The minimum wage itself is not so much of a problem, since it has not normally been above even the unskilled construction worker wage in recent years.

It is not so easy to see how well markets work for skilled blue collar workers and white collar workers in general. Over the long run, there does appear to be a relation between wage rates and the state of the market; the increasing supply of people looking for white collar jobs has, over the last fifteen years, lowered the white collar/blue collar wage ratio in manufacturing and this is suggestive. In general, however, it may well be that in these more complicated and narrower markets, it takes some time for excess supply to have its impact.

It is unclear the extent to which institutions designed to direct people to sectors where demand for labor exists could contribute to relieving the unemployment problem for blue collar groups, especially the unskilled. For the relatively homogeneous labor supply which becomes available for work on construction, small scale industry, etc., it appears, at first sight, that not much could be anticipated here—that, in fact, the basic problem is not one of lack of information with respect to demand, but lack of demand. It is also true, however, that most people develop skills over time; in construction, for example, a reasonable share of the originally unskilled workers gradually move to higher skill classifications; the same goes for workers in small scale industry. Although the individual may be as well informed on where he can obtain employment in the short run as anyone else, an institution which would guide him toward sectors where the skills he learns in the next few years will have greater long run productivity might make a contribution. It is not clear how such an institution would function, or what leverage it could have over the decision process of individuals. So few studies have been done with respect to occupational patterns over life, occupational immobility at various

levels of experience, etc. as to make this a difficult problem to handle.

Recent empirical evidence suggests also that there is substantial turnover of labor in middle sized manufacturing firms; possibly better institutions would permit more efficient reallocation of labor among firms over time

Given that some part of this white collar unemployed pool involves specialized people , the policy option of improving information might be a productive one. It appears, hoever, that much of this labor force is also rather homogeneous, but simply at a higher educational and aspiration level than the unskilled blue collar aspirants. In such an event, institutions designed to bring demand and supply together may not provide too much of the answer. Perhaps, though, the increasing complexity of the economy over time would make such an institution more important.

Among the institutions evolved to aid in better use of human resources in the U.S. and other developed countries are (a) information exchanges, (b) retraining programs, (c) educational programs (formal and informal) designed to counsel individuals to choose areas of good demand and supply the education necessary for them to do so.

On the surface, at least, it would seem that this last function probably offers the greatest potential in a country like Colombia. The main institution which now embodies the function of technical and practical training is SENA, financed by a payroll tax and employer contributions, it has now graduated a large number of people and constitutes a good test case of the potential of this line of activity. But its contribution is hard to evaluate. To some extent it has substituted for (perhaps with an increase in efficiency) a learning by doing process which would otherwise occur in the firm. In some

cases, it has gone overboard and produced more people than necessary with a certain type of preparation. In general, the objective appears to have been to prepare people for the large scale firms; this is natural, since it is they who send people to SENA and they who support it financially. But there is serious question, given the employment records of the large scale firms in the past, of whether they can make a substantial contribution to the overall employment problem. Employment has been expanding more rapidly in the last six or seven years in small scale than in large scale industry, as nearly as can be made out, and it would appear to be here, where the individual firm has less of a chance to undertake and finance its own training, that such an institution could make an important contribution. SENA (and several other institutions, as well) have, in the last few years, moved into the area of advising small firms on management, etc., but insufficient time has elapsed to permit an evaluation of these programs. For the most part, they are not specifically aimed at training individuals, but at improving the functioning of the firm. It may well be that this sort of contribution is the key one. Some people have argued in developed countries that macro economic (monetary and fiscal) policy is more important in terms of achieving a solution to the employment problem than is retraining, etc. Such a position could not be held in a country like Colombia, but a somewhat parallel one could be - that macro type employment policy of the sort which attempts to distinguish sectors and types of firms with high employment generating capacity and then design institutions to help their progress might be a more productive direction than one which attempts to attack the problem in terms of the individuals who have employment problems.

Table A 1

Open Unemployment in Twelve Colombian Cities, 1963-69
(Percentage of Active Labor Force Unemployed)

| Year | Bogota | Medellin | Cali | Barranquilla | Others |
|---|---|---|---|---|---|
| **1963** | | | | | |
| March | 8.7* | ---- | ---- | ---- | ---- |
| June | 9.0* | ---- | ---- | ---- | ---- |
| September | 7.7 | ---- | ---- | ---- | ---- |
| October | ---- | ---- | ---- | ---- | 9.9 1/ |
| November | ----* | 12.8 | ---- | ---- | ---- |
| December | 7.4 | ---- | ---- | ---- | 8.9 1/ |
| **1964** | | | | | |
| March | 7.0* | 13.6 | ---- | ---- | 8.6 1/ |
| June | 7.5* | ---- | ---- | ---- | 6.9 1/ |
| July | ----* | 13.6 | ---- | ---- | ---- |
| September | 7.7 | ---- | ---- | ---- | 8.5 1/ |
| November | ---- | 11.3 | ---- | ---- | ---- |
| December | ---- | ---- | ---- | ---- | 8.3 1/ |
| **1965** | | | | | |
| March | 9.2 | 12.0 | 13.2 | ---- | ---- |
| June | 8.8 | ---- | ---- | ---- | ---- |
| July | ---- | 10.7 | ---- | ---- | ---- |
| September | 9.7 | ---- | 11.8 | ---- | ---- |
| November | ---- | 9.7 | ---- | ---- | ---- |
| December | 8.0 | ---- | ---- | ---- | ---- |
| **1966** | | | | | |
| March | 10.1 | 10.6 | ---- | ---- | ---- |
| June | 11.6 | ---- | ---- | ---- | ---- |
| July | ---- | 11.5 | ---- | ---- | ---- |
| August | ---- | ---- | ---- | ---- | 11.0 2/ |
| September | 9.6 | ---- | ---- | ---- | ---- |
| December | 9.2 | ---- | ---- | 16.0 | ---- |
| **1967** | | | | | |
| January | ---- | 10.9 | ---- | ---- | ---- |
| March | ---- | ---- | ---- | ---- | ---- |
| April | 16.1 | ---- | ---- | ---- | ---- |
| May | ---- | ---- | 14.9 | ---- | 13.1 3/ |
| June | 12.7 | ---- | ---- | ---- | ---- |
| September | 10.6 | ---- | ---- | ---- | ---- |
| October | ---- | 14.5 | ---- | 18.4 | 9.8 4/<br>17.4 5/<br>10.8 6/ |

(cont.)

Table A-1 (cont.)

| Year | Bogotá | Medellín | Cali | Barranquilla | Others |
|---|---|---|---|---|---|
| 1968 | | | | | |
| March | 13.5 | ---- | ---- | ---- | ---- |
| May | ---- | ---- | 14.9 | ---- | ---- |
| June | 11.6 | ---- | ---- | ---- | 9.9 7/ |
| September | 11.2 | ---- | ---- | ---- | ---- |
| December | 9.8 | ---- | ---- | ---- | ---- |
| 1969 | | | | | |
| March | 11.0 | ---- | ---- | ---- | ---- |
| April | ---- | ---- | ---- | ---- | 7.5 8/ |
| June | 11.6 | ---- | ---- | ---- | ---- |
| July | ---- | ---- | ---- | ---- | 8.5 1/ |
| September | 8.9 | ---- | ---- | ---- | ---- |
| December | 6.9 9/ | ---- | ---- | ---- | ---- |
| 1970 | | | | | |
| March | 8.8 | | | | |
| June | 7.9 | | | | |

*Adjusted upwards from the CEDE estimates according to the bias calculated by Robert Slighton, Unemployment..., op. cit.

1/ Girardot. 2/ Pereira. 3/ Ibagué. 4/ Bucaramanga. 5/ Manizales. 6/ Popayán. 7/ Cúcuta. 8/ Barrancabermeja. 9/ Provisional result.

Sources: ILO, op. cit., pp. 362-3 and originally from CEDE, University of the Andes; Economic Research Centre (CIE), University of Antioquia; Centre for Research on Economic Development (CIDE), University of Valle; Economic Research Department (DIE), University of Atlántico.

Table A-2

Age Specific Unemployment Rates, 1970, By Sex,
Type of Unemployment and Rural/Urban.

| | URBAN | | | RURAL | | |
|---|---|---|---|---|---|---|
| Age | Cesantes | Aspirantes | Total | Cesantes | Aspirant | Total |
| | | | MEN | | | |
| 12-19 | 8.1 | 13.0 | 21.1 | 2.3 | 3.1 | 5.4 |
| 20-24 | 8.9 | 6.0 | 14.9 | 3.4 | 1.4 | 4.8 |
| 25-34 | 5.8 | 1.2 | 7.0 | 2.3 | 0.1 | 2.4 |
| 35-44 | 4.6 | 0.1 | 4.7 | 1.7 | - | 1.7 |
| 45-54 | 5.0 | - | 5.0 | 1.2 | - | 1.2 |
| 55-64 | 4.4 | - | 4.4 | 1.0 | - | 1.0 |
| 65- + | 4.8 | 0.5 | 5.3 | 1.5 | - | 1.5 |
| | | | WOMEN | | | |
| 12-19 | 4.9 | 11.6 | 16.5 | 6.7 | 17.2 | 23.9 |
| 20-24 | 9.3 | 8.9 | 18.2 | 8.5 | 3.3 | 11.8 |
| 25-34 | 7.7 | 4.4 | 12.1 | 3.9 | 2.7 | 6.6 |
| 35-44 | 4.2 | 1.8 | 6.0 | 2.8 | 3.3 | 6.1 |
| 45-54 | 3.1 | 1.8 | 4.9 | 2.4 | - | 2.4 |
| 55-64 | 4.0 | 2.6 | 6.6 | 1.5 | - | 1.5 |
| 65- + | 1.7 | - | 1.7 | 2.4 | - | 2.4 |

Source:

The figures are from DANE, Boletin Mensual de Estudistica #238, p. 62.

Table A-2a

Occupations Sought by Open Urban Unemployed, 1967
(Percentages of those in each category)

| Occupation Group[1] | Previous Job Holder | First-Time Job Seeker | Total | Employed Labour Force |
|---|---|---|---|---|
| Professional | 3.1 | 5.4 | 4.0 | 7.4 |
| Executive | 0.7 | 0.3 | 0.6 | 1.8 |
| Clerical | 19.2 | 34.0 | 24.5 | 14.4 |
| Sales staff | 10.7 | 19.0 | 13.6 | 15.1 |
| Rural Workers | 1.3 | 0.1 | 0.9 | 2.0 |
| Miners | 0.4 | 0.3 | 0.3 | 0.3 |
| Transport Workers | 6.4 | 1.9 | 4.7 | 5.7 |
| Craftsmen | 40.1 | 23.1 | 33.5 | 30.5 |
| Labourers | 2.4 | 3.1 | 2.7 | 2.4 |
| Service Workers | 10.8 | 9.1 | 10.3 | 8.8 |
| Domestic Servants | 1.9 | 0.8 | 1.6 | 9.9 |
| Defence and Police | 0.3 | - | 0.2 | 1.0 |
| Others | 2.7 | 2.9 | 2.7 | 0.7 |
| TOTAL | 100.0 | 100.0 | 100.0 | 100.0 |

[1] As described by respondent.

Source:

ILO, op.cit., pg. 366; weighted average from city data in tables 14 and 21 of CEDE Encuestas Urbanas de Empleo y Desempleo, op.cit.

Table A-2b-

Selected Growth Rates for Years When Unemployment Data Available

| | 1949 & 1950 (average)* | 1951 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 |
|---|---|---|---|---|---|---|---|---|---|
| Gross Domestic Product (market prices) | 4.85 | 3.12 | 5.41 | 3.29 | 6.17 | 3.60 | 5.35 | 4.20 | 5.8 |
| Gross Domestic Product of Non-Agriculture (market prices) | 9.4 | 4.26 | 6.43 | 4.56 | 6.40 | 6.40 | 6.19 | 3.83 | 5.68 |
| | | | 5.50 | | | 6.33 | | 4.76 | |
| Gross National Income (market prices) | 9.43[1] | 0.65 | 5.26 | 2.84 | 8.90 | 2.598 | 5.22 | 3.04 | |
| Industry | 10.52 | 3.14 | 5.8 | 4.7 | 5.9 | 4.6 | 6.6 | 3.5 | 6.1 |
| | | | 5.8 | | | 5.7 | | 4.8 | |
| Estimated Unemployment Rate in 4 Largest Cities | | 4-7[2] | 11 | 11 | 10.5 | 11.5 | 14 | 13 | 11 |

*Based on ECLA data (United Nations, Analyses and Projections..., op. cit.).

[1]Gross National Product (Gross National Income data not available)

[2]No comparable data is available for this year; hence the high uncertainty. See the discussion on page14.

Sources: Output data from Cuentas Nacionales except for 1949-50 when it comes from the ECLA study.

Unemployment data from the sources cited in Table A-3 for 1962-69 and from the 1951 population census (data adjusted) for 1951.

Table A-3

Distribution of Urban Unemployed by Length of Time Seeking Work, Occupation, and Previous Work Experience, 1967

| Period of Unemployment | Professional | Executive | Clerical | Sales Staff | Transport workers | Craftsman | Laborers | Service Workers | Domestic servants | Others | Total[a] | 1970 Urban Colombia |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | All workers | | | | | | | |
| Total | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 5 weeks or more | 78 | 57 | 75 | 77 | 74 | 73 | 85 | 73 | 57 | 89 | 74 | 73 |
| 3 months or more | 53 | 43 | 50 | 53 | 41 | 48 | 67 | 51 | 33 | 63 | 50 | 49 |
| 1 year or more | 23 | -- | 26 | 26 | 14 | 23 | 46 | 27 | 19 | 16 | 25 | = 10 or less |
| | | | | | Previously employed | | | | | | | |
| Total | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | |
| 5 weeks or more | 78 | 50 | 70 | 74 | 74 | 71 | 81 | 70 | 50 | 83 | 71 | |
| 3 months or more | 52 | 50 | 47 | 49 | 42 | 45 | 67 | 48 | 28 | 58 | 46 | |
| 1 year or more | 26 | -- | 23 | 22 | 12 | 20 | 52 | 24 | 17 | 17 | 22 | |
| | | | | | First-time job seekers | | | | | | | |
| Total | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | |
| 5 weeks or more | 80 | 100 | 81 | 79 | 75 | 80 | 92 | 79 | 100 | 100 | 81 | |
| 3 months or more | 55 | -- | 54 | 57 | 38 | 58 | 67 | 53 | 67 | 71 | 56 | |
| 1 year or more | 20 | -- | 29 | 30 | 25 | 32 | 33 | 33 | 33 | 14 | 30 | |

[a] Includes mining and "rural workers" living in cities.

[b] The source for 1970 did not have a category for 1 year. Only 15.6% had been unemployed more than 33 weeks, so from this the figure presented here was guessed.

Sources: For 1967 figures ILO, op. cit., p. 365, and originally cited as "weighted average of CEDE data from eight cities in 1967; original data from table 9 in Encuestas Urbanas de Empleo y Desempleo, op. cit., Apendice estadistico, July 1969.

For 1970, based on tabulados of DANE, Encuesta de Hogares, 1970.

Table A-3a

Distribution of Unemployment By Length of Time Seeking Work, Region, and Rural-Urban

| | Total | 5 Weeks Or More | 9 Weeks Or More | 25 Weeks Or More | 33 Weeks Or More |
|---|---|---|---|---|---|
| Region #1 | | | | | |
| Total | 100 | 80.14 | 66.45 | 36.34 | 22.60 |
| Urban | 100 | 80 | 65.58 | 36.22 | 23.80 |
| Rural | 100 | 79.49 | 58.98 | 33.36 | 15.38 |
| Urban: Men | 100 | 74.65 | 59.16 | 25.37 | 19.71 |
| Urban: Women | 100 | 91.18 | 88.24 | 58.84 | 32.35 |
| Urban Rate- Men | 9.10 | 6.79 | 5.38 | 2.31 | 1.79 |
| Urban Rate- Women | 14.89 | 13.58 | 13.14 | 8.76 | 4.17 |
| Region #2 | | | | | |
| Total | 100 | 73.78 | 54.11 | 32.82 | 14.73 |
| Urban | 100 | 69.77 | 52.81 | 34.60 | 19.84 |
| Rural | 100 | 86.67 | 60.01 | 26.69 | 26.69 |
| Urban: Men | 100 | 68.75 | 50.00 | 31.26 | 9.37 |
| Urban: Women | 100 | 71.43 | 57.15 | 42.87 | 14.28 |
| Urban Rate- Men | 4.45 | 3.06 | 2.23 | 1.39 | 0.42 |
| Urban Rate - Women | 5.49 | 3.92 | 3.16 | 2.35 | 0.78 |
| Region #3 | | | | | |
| Total | 100 | 84.85 | 69.70 | 35.62 | 18.18 |
| Urban | 100 | 85.39 | 70.01 | 35.41 | 17.69 |
| Rural | 100 | 50.00 | 50.00 | 50.00 | 50.00 |
| Urban: Men | 100 | 84.34 | 68.68 | 19.74 | 14.45 |
| Urban: Women | 100 | 87.24 | 72.35 | 48.96 | 23.40 |
| Urban Rate - Men | 10.40 | 8.77 | 7.14 | 2.05 | 1.50 |
| Urban Rate - Women | 16.87 | 14.71 | 12.21 | 8.26 | 3.95 |
| Region #4 | | | | | |
| Total | 100 | 57.45 | 39.02 | 9.26 | 2.12 |
| Urban | 100 | 63.42 | 46.35 | 17.10 | 11.38 |
| Rural | 100 | 53.13 | 37.51 | 18.77 | 9.37 |
| Urban: Men | 100 | 64.36 | 48.52 | 16.84 | 12.87 |
| Urban: Women | 100 | 59.10 | 36.38 | 18.20 | 4.54 |
| Urban Rate - Men | 9.67 | 6.22 | 4.69 | 1.63 | 1.24 |
| Urban Rate - Women | 9.29 | 5.49 | 3.38 | 1.69 | 4.22 |
| Region #5 | | | | | |
| Total | 100 | 61.16 | 50.37 | 19.45 | 12.23 |
| Urban | 100 | 66.67 | 55.22 | 22.94 | 14.58 |
| Rural | 100 | 46.35 | 36.60 | 7.34 | 2.43 |
| Urban: Men | 100 | 61.30 | 45.18 | 16.16 | 11.29 |
| Urban: Women | 100 | 76.48 | 73.54 | 35.32 | 20.58 |
| Urban Rate - Men | 800 | 4.90 | 3.61 | 1.29 | 0.90 |
| Urban Rate - Women | 9.81 | 7.50 | 7.21 | 3.40 | 2.02 |

Table A-3a (continued)

| Total Country | | | | |
|---|---|---|---|---|
| Total | 69.98 | 54.26 | 25.23 | 13.04 |
| Urban | 73.68 | 53.06 | 28.83 | 15.88 |
| Rural | 67.02 | 48.41 | 21.76 | 14.44 |
| Men | 70.88 | 54.79 | 29.75 | 13.85 |
| Women | 78.19 | 66.02 | 41.35 | 19.41 |
| Rate Urban Men | 5.28 | 4.89 | 1.77 | 1.24 |
| Rate Urban Women | 12.12 | 8.43 | 5.34 | 3.23 |

Sources and Methodology

The figures come from tabulados of DANE's Encuesta de Hogares. The tabulados indicate clearly a rounding phenomenon in reporting of weeks unemployed, so an attempt has been made here to choose numbers of weeks at which this problem may be relatively less serious; the only numbers which might suffer from a serious bias are those referring to "25 weeks or more"; since a large number of people reported 21-24 weeks of unemployment (in some regions almost no one reported 25-26), it is quite possible that this figure is downward biased.

Table A-4

The Extent of Urban Work Opportunities, 1967

(Percentage of Active Urban Labour Force)

| | Total | Males | Females |
|---|---|---|---|
| 1. Open unemployment (persons without work and seeking it) | 14 | 12 | 19 |
| 2. Disguised unemployment (persons without work and who would probably seek it if unemployment were much lower) | (7)[1] | 10 | -[2] |
| 3. Open underemployment[3] (persons working less than 32 hours per week and seeking to work longer) | 2 | 2 | 1 |
| 4. Disguised underemployment[3] (persons working less than 32 hours per week, who would probably seek longer hours if the opportunity were available) | 3 | 2 | 4 |
| TOTAL[4] | (25)[1] | 25 | (25)[1] |

[1]Incomplete total (see note 2).

[2]No estimate possible but probably substantial.

[3]The proportion of the labour force working less than 32 hours a week is larger than this figure which is obtained by expressing the number of hours of underemployment in units of 48 hours (i.e. in its full-time equivalent) before the percentage is worked out.

[4]Totals may differ from the sums of items because of rounding.

Source:

ILO, op.cit., pg. 18; based on CEDE's 1967 surveys of eight of the largest cities.

Table A-5a

Percentage Distribution of Population by Occupation Position, Age and Sex

1951

| Age-Group | | Employers | Independ. Workers | Family Helpers | White Collar W'krs. | Blue Collar W'krs. | Others | Participation Rate | Non-Participation Rate | No. of People | Economica Activ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5-24 | Total | 0.96 | 6.63 | 9.28 | 12.75 | 22.18 | 4.27 | 55.72 | 44.28 | 2,233,462 | 1,244,511 |
| | Men | 1.87 | 9.33 | 17.73 | 10.78 | 42.17 | 8.14 | 90.02 | 9.98 | 1,077,496 | 970,091 |
| | Women | 0.11 | 3.40 | 1.40 | 14.60 | 3.55 | 0.66 | 23.72 | 76.28 | 1,155,966 | 274,420 |
| 25-34 | T | 5.28 | 14.08 | 3.29 | 12.01 | 21.10 | 2.03 | 57.80 | 42.20 | 1,536,103 | 888,019 |
| | M | 10.32 | 23.63 | 5.71 | 14.05 | 40.26 | 3.60 | 97.57 | 2.43 | 751,550 | 733,447 |
| | W | 0.47 | 4.93 | 0.97 | 10.04 | 2.75 | 0.52 | 19.68 | 80.32 | 784,553 | 154,572 |
| 35-44 | T | 9.36 | 18.86 | 1.40 | 9.72 | 17.13 | 1.75 | 58.23 | 41.77 | 1,140,088 | 663,929 |
| | M | 17.74 | 31.67 | 2.04 | 11.14 | 32.22 | 3.03 | 97.84 | 2.16 | 566,120 | 554,083 |
| | W | 1.06 | 6.58 | 0.78 | 8.33 | 2.24 | 0.48 | 19.49 | 81.51 | 573,968 | 109,846 |
| 45-54 | T | 11.70 | 21.20 | 0.78 | 8.02 | 14.19 | 1.74 | 57.65 | 42.35 | 748,921 | 431,719 |
| | M | 21.64 | 35.67 | 0.92 | 9.01 | 26.60 | 2.99 | 96.83 | 3.17 | 376,682 | 364,814 |
| | W | 1.65 | 6.55 | 0.64 | 7.03 | 1.62 | 0.48 | 17.97 | 82.03 | 372,239 | 66,905 |
| 55-64 | T | 12.50 | 21.66 | 0.64 | 5.96 | 11.28 | 1.71 | 53.77 | 46.23 | 440,342 | 235,773 |
| | M | 23.18 | 37.58 | 0.80 | 6.42 | 21.69 | 3.01 | 92.68 | 7.32 | 217,682 | 201,805 |
| | W | 2.07 | 6.10 | 0.49 | 5.51 | 1.10 | 0.44 | 15.70 | 84.29 | 222,660 | 34,968 |
| 65+ | T | | | | | | | | | 351,338 | 134,813 |
| | M | | | | | | | | | 159,932 | 114,393 |
| | W | | | | | | | | | 191,406 | 19,720 |
| 15-19 | T | 0.30 | 4.25 | 11.25 | 11.92 | 20.13 | 4.75 | 52.60 | 47.40 | 1,150,484 | 605,137 |
| | M | 0.56 | 5.83 | 22.00 | 8.46 | 38.66 | 9.27 | 84.78 | 15.22 | 545,073 | 462,138 |
| | W | 0.06 | 2.83 | 1.57 | 15.04 | 3.44 | 0.69 | 23.63 | 76.37 | 605,411 | 142,999 |
| 20-24 | T | 1.36 | 6.94 | 5.93 | 11.00 | 20.12 | 3.10 | 48.47 | 40.96 | 1,082,978 | 639,37- |
| | M | 3.23 | 12.92 | 13.36 | 13.15 | 45.77 | 6.99 | 95.42 | 4.58 | 532,423 | 507,753 |
| | W | 0.17 | 4.04 | 1.22 | 14.13 | 3.68 | 0.64 | 23.88 | 76.12 | 550,555 | 131,-21 |

Table A-5a (cont'd.)

1964

| Age Group | | Employers | Independ. Workers | Family Helpers | White Collar W'krs. | Blue Collar W'krs. | Others | Activity Rate | Inactivity Rate |
|---|---|---|---|---|---|---|---|---|---|
| 28-37 | Total | 4.89 | 15.82 | 1.83 | 16.01 | 17.89 | 0.64 | 54.44 | 45.56 |
| | Men | 9.46 | 27.89 | 2.69 | 20.95 | 34.69 | 1.13 | 96.91 | 3.09 |
| | Women | 0.65 | 4.56 | 1.04 | 11.44 | 2.33 | 0.19 | 20.21 | 79.79 |
| 38-47 | T | 7.68 | 19.82 | 1.01 | 12.63 | 16.31 | 0.52 | 55.52 | 44.48 |
| | M | 14.31 | 34.01 | 1.04 | 16.18 | 30.88 | 0.89 | 97.03 | 2.97 |
| | W | 1.22 | 6.02 | 0.97 | 9.18 | 2.13 | 0.16 | 19.68 | 80.32 |
| 48-57 | T | 9.35 | 21.69 | 0.72 | 10.24 | 14.22 | 0.52 | 54.31 | 45.69 |
| | M | 17.03 | 36.83 | 0.61 | 12.88 | 26.74 | 0.91 | 95.00 | 5.00 |
| | W | 1.60 | 6.42 | 0.83 | 7.58 | 1.61 | 0.13 | 18.17 | 81.83 |
| 58-67 | T | 9.19 | 20.67 | 0.55 | 6.98 | 10.96 | 0.46 | 46.72 | 53.28 |
| | M | 17.17 | 36.65 | 0.54 | 8.67 | 21.41 | 0.83 | 85.27 | 14.73 |
| | W | 1.59 | 5.46 | 0.55 | 5.37 | 1.01 | 0.11 | 14.09 | 85.91 |
| 68-77 | T | 7.21 | 15.69 | 0.39 | 3.91 | 6.88 | 0.21 | 33.06 | 66.94 |
| | M | 13.97 | 29.20 | 0.48 | 4.74 | 14.08 | 0.36 | 62.79 | 37.21 |
| | W | 1.25 | 3.80 | 0.31 | 3.18 | 0.54 | 0.074 | 9.15 | 90.85 |

Methodology: Interpolation between the age categories in the 1964 census, part of which fall in a given cohort as defined in 1951. Thus the figures for the 28-37 cohort (the 15-24 cohort in 1951) are a weighted average of those for the 25-34 and 35-44 cohorts in 1964.

Table A-5b

Percentage Distribution of Population by Sector, Age and Sex

1951

| Age Group in 1951 | | Population (Number) | Agri-culture | Extrac-tive | Trans-porta-tion | Con-struc-tion | Elec., Gas, Water | Com-merce | Trans., Comm. | Ser-vices | Other | Active |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| < 15 | Men | 2,429,797 | 3.047 | 0.048 | 0.337 | 0.101 | -- | 0.149 | 0.080 | 0.735 | 0.247 | 4.745 |
| | Women | 2,348,458 | 0.138 | 0.016 | 0.170 | 0.003 | -- | 0.026 | 0.006 | 1.352 | 0.025 | 1.736 |
| | Total | 4,778,255 | 1.617 | 0.032 | 0.255 | 0.053 | -- | 0.089 | 0.044 | 1.039 | 0.138 | 3.266 |
| 15-19 | M | 545,073 | 57.450 | 0.503 | 8.822 | 2.992 | 0.134 | 3.207 | 2.432 | 5.673 | 3.173 | 84.785 |
| | W | 605,411 | 1.886 | 0.370 | 5.339 | 0.056 | 0.013 | 1.188 | 0.209 | 13.941 | 0.620 | 23.620 |
| | T | 1,150,484 | 28.211 | 0.622 | 6.989 | 1.447 | 0.070 | 2.145 | 1.262 | 10.023 | 1.829 | 52.598 |
| 20-24 | M | 532,423 | 56.951 | 1.414 | 11.126 | 4.190 | 0.339 | 4.015 | 4.678 | 9.581 | 3.098 | 95.404 |
| | W | 550,555 | 1.815 | 0.456 | 6.076 | 0.075 | 0.024 | 1.595 | 0.320 | 12.763 | 0.741 | 23.871 |
| | T | 1,082,978 | 28.926 | 0.927 | 8.559 | 2.098 | 0.179 | 2.785 | 2.463 | 11.202 | 1.900 | 59.039 |
| 25-44 | M | 1,317,670 | 58.527 | 1.809 | 10.468 | 4.773 | 0.424 | 5.671 | 5.079 | 7.229 | 3.742 | 97.713 |
| | W | 1,358,521 | 2.642 | 0.518 | 4.820 | 0.056 | 0.017 | 1.409 | 0.171 | 9.300 | 0.531 | 19.464 |
| | T | 2,676,191 | 30.158 | 1.154 | 7.631 | 2.378 | 0.217 | 3.507 | 2.587 | 8.276 | 2.112 | 57.991 |
| 45-64 | M | 594,364 | 64.033 | 1.162 | 7.290 | 4.005 | 0.284 | 6.007 | 2.647 | 6.000 | 3.903 | 95.332 |
| | W | 594,899 | 4.315 | 0.524 | 3.199 | 0.039 | 0.011 | 1.415 | 0.094 | 7.074 | 0.453 | 17.124 |
| | T | 1,189,263 | 34.161 | 0.843 | 5.244 | 2.021 | 0.148 | 3.710 | 1.370 | 6.537 | 2.177 | 56.211 |
| > 64 | M | 159,932 | 55.012 | 0.563 | 4.304 | 2.065 | 0.089 | 3.432 | 0.758 | 3.295 | 2.322 | 71.839 |
| | W | 191,406 | 3.581 | 0.366 | 1.552 | 0.024 | 0.004 | 0.641 | 0.032 | 3.832 | 0.271 | 10.303 |
| | T | 351,338 | 26.993 | 0.456 | 2.805 | 0.953 | 0.0[illegible] | 1.911 | 0.363 | 3.587 | 1.204 | 38.314 |

Table A-5b (cont'd.)

Percentage Distribution of Population by Sector, Age and Sex

1964

| Age Group in 1964 | | Population | Agriculture | Extractive | Transportation | Construction | Elec., Gas, Water | Commerce | Trans., Comm. | Services | Other | Unemployed | Active | Inactive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| < 15 | M | 668,179 | 22.037 | 0.248 | 1.207 | 0.363 | 0.006 | 0.858 | 0.168 | 1.291 | 0.665 | 1.343 | 26.869 | 73.131 |
| | W | 659,320 | 0.698 | 0.096 | 0.434 | 0.009 | 0.002 | 0.168 | 0.014 | 5.566 | 0.107 | 0.246 | 7.293 | 92.707 |
| | T | 1,327,499 | 11.538 | 0.172 | 0.823 | 0.200 | 0.004 | 0.515 | 0.092 | 3.415 | 0.388 | 0.798 | 17.147 | 82.853 |
| 15-19 | M | 836,284 | 43.319 | 0.709 | 6.758 | 2.998 | 0.070 | 3.836 | 1.359 | 4.737 | 2.544 | 4.257 | 66.291 | 33.709 |
| | W | 929,756 | 1.469 | 0.260 | 2.959 | 0.049 | 0.019 | 1.861 | 0.219 | 14.084 | 0.860 | 1.085 | 21.847 | 78.153 |
| | T | 1,766,040 | 21.286 | 0.501 | 4.758 | 1.403 | 0.043 | 2.796 | 0.749 | 9.647 | 1.710 | 2.587 | 42.804 | 57.196 |
| 20-24 | M | 671,272 | 36.794 | 1.135 | 12.349 | 4.944 | 0.284 | 6.494 | 3.056 | 10.089 | 3.792 | 5.515 | 80.785 | 19.215 |
| | W | 746,103 | 1.659 | 0.439 | 4.790 | 0.096 | 0.042 | 2.836 | 0.448 | 14.599 | 1.334 | 1.722 | 28.251 | 71.749 |
| | T | 1,417,375 | 18.035 | 0.858 | 8.366 | 2.345 | 0.138 | 4.562 | 2.061 | 12.453 | 2.519 | 3.255 | 56.946 | 43.054 |
| 25-44 | M | 1,852,883 | 48.475 | 1.697 | 13.142 | 5.748 | 0.337 | 8.477 | 5.931 | 6.723 | 3.299 | 4.615 | 96.829 | 3.111 |
| | W | 1,986,229 | 2.285 | 0.458 | 4.224 | 0.080 | 0.022 | 2.290 | 0.294 | 9.944 | 0.757 | 0.795 | 20.354 | 79.646 |
| | T | 3,939,212 | 24.579 | 1.056 | 8.528 | 2.815 | 0.203 | 5.277 | 3.015 | 8.827 | 1.984 | 2.630 | 57.294 | 42.706 |
| 45-64 | M | 864,447 | 55.159 | 1.301 | 8.697 | 5.283 | 0.283 | 9.143 | 3.359 | 7.927 | 2.618 | 4.165 | 93.671 | 6.329 |
| | W | 857,644 | 3.562 | 0.444 | 2.900 | 0.066 | 0.009 | 2.322 | 0.119 | 7.630 | 0.442 | 0.580 | 17.476 | 82.524 |
| | T | 1,782,091 | 29.170 | 0.869 | 5.777 | 2.655 | 0.145 | 5.708 | 1.727 | 7.728 | 1.522 | 2.359 | 55.301 | 44.699 |
| > 64 | M | 240,393 | 42.152 | 0.481 | 3.652 | 1.902 | 0.053 | 5.200 | 0.965 | 3.698 | 1.134 | 2.209 | 58.918 | 41.081 |
| | W | 283,308 | 2.355 | 0.282 | 1.157 | 0.020 | 0.001 | 0.969 | 0.025 | 3.102 | 0.171 | 0.242 | 8.302 | 91.698 |
| | T | 524,261 | 20.603 | 0.373 | 2.301 | 0.883 | 0.025 | 2.909 | 0.310 | [illegible] | 0.612 | 1.144 | 31.512 | 68.488 |

Source: 1951 and 1964 population censuses.

Table A-6

## Influence of Increasing Education Enrollment on Labor Force Participation of Urban Males

| Age | 1951 Partic. Ratio (1) | 1951 Enrollment (2) | 1951 Total (1) + (2) | 1964 Parti. Ratio (4) | 1964 Enrollment (5) | 1964 Total (4) + (5) | 1970 Part. Rate (7) | 1970 Enrollment Rate (8) | 1970 Total (7) + (8) | Age |
|---|---|---|---|---|---|---|---|---|---|---|
| 15-19 | 71.81 | 26.63 | 97.88 | 47.73 | 42.40 | 90.0 | 25.9<br>40.5[a] | 65.4<br>56.0[a] | 91.3<br>96.5[a] | 12-19 |
| 20-24 | 91.40 | 6.24 | 97.64 | 83.30 | 10.56 | 93.86 | 76.9 | 18.6 | 95.5 | 20-24 |
| 25-34 | 96.31 | .82 | 97.13 | 94.78 | 1.22 | 96.00 | 95.9 | | | |
| 35-44 | 96.93 | .06 | 96.99 | 96.51 | -0- | 96.51 | 96.5 | | | |
| 45-54 | 95.29 | - | 95.29 | 94.29 | -0- | 94.29 | 93.9 | | | |
| 55-64 | 88.70 | - | 88.70 | 79.74 | -0- | 79.74 | 77.2 | | | |
| 65 + | 62.79 | - | 62.79 | 41.53 | .03 | 40.56 | 42.7 | | | |
| | | | | | | | 67.3 | 23.6 | 90.9 | >/12 |
| Total | | | | | | | 79.13[b] | 15.6[b] | 94.73[b] | 15-64 |
| 15-64 | 91.52 | 6.09 | 96.61 | 83.07 | 10.61 | 93.68 | | | | |

a,b, deduced, as indicated in "Sources and Methodology;" not available directly from the sources.

Sources and Methodology: Figures for 1951 and 1964 are calculated from the population census figures of those years. The 1970 source is D.G.E., Encuesta de Hogares, 1970. Neither that study nor the subsequent discussion of participation rates, unemployment rates, etc., in D.G.E., Boletin Mensual de Estadistica #238 presented figures comparable to those shown for 1951 and 1964. Data were available for age groups 12-19, 20-24, and everyone over 12. Estimates for the age groups 15-19 and 15-64 are deduced here using a variety of information in the Encuesta with respect to age structure, and making some assumptions with respect to the crossing relative participation and enrollment rates as between children 12-14 and 15-19. (Although some students are both studying and participating in the labor force, there is no double counting here, since the enrollment ratio refers only to students who are classified as inactive.)

Table A-7

Participation or Enrollment Rates, 1951, 64 & 70

Age Group 15-64

| | Participation Ratio | Enrollment Ratio | Total |
|---|---|---|---|
| 1951 | 56.8 | 2.575 | 59.38 |
| 1964 | 49.5 | 5.64 | 55.14 |
| 1970 | 52.0 | 10.15 | 62.15 |

Sources and Methodology: As for Table A-6, the 1951 and 1964 figures come directly from the population census of those years and the 1970 figures were calculated from DANE, Encuesta de Hogares 1970. The accuracy of the estimates for 1970 is probably somewhat higher here than in Table A-6, since the overall participation and enrollment ratios for this age category are easier to arrive at, given the other information available in the Encuesta, than are those for uban males only.

Table A-8

Blue Collar Workers as a Share of Total Labor Force, By Sector, 1964

| | Agriculture etc. | Mining | Manufacturing | Construccion | Electricity Gas, Water, etc. | Commerce | Transportation, storage, etc. | Services | Other |
|---|---|---|---|---|---|---|---|---|---|
| Remunerated Blue Collar Workers (Obreros) | 472,400 | 35,223 | 272,940 | 154,316 | 4,377 | 19,511 | 37,124 | 39,507 | 37,174 |
| Family helpers | 309,267 | 6,752 | 18,541 | 1,765 | 24 | 12,854 | 1,238 | 5,184 | 2,060 |
| Independent workers | 720,857 | 22,551 | 165,158 | 37,808 | 453 | 197,259 | 37,598 | 73,022 | 28,381 |
| Employers | 308,291 | 1,507 | 34,482 | 4,912 | 141 | 37,742 | 5,781 | 20,214 | 5,842 |
| Total Labor Force | 2,419,753 | 80,741 | 649,620 | 215,974 | 13,185 | 267,366 | 189,058 | 920,679 | |
| Blue Collar Workers | | | | | | | | | |
| Estimate A | 2,202,031 | 67,452 | 456,649 | 191,801 | 4,995 | — | 74,741 | 132,927 | |
| Estimate B | 2,299,880 | 70,473 | 572,046 | 210,289 | 9,500 | 59,036 | 150,429 | 624,119 | |
| Blue Collar Workers/ Total Labor Force | | | | | | | | | |
| Ratio A | 33.73 | 83.54 | 70.29 | 88.81 | 37.88 | — | 39.53 | 14.44 | |
| Ratio B | 94.76 | 86.71 | 81.5 | 96.46 | 72.30 | 13.6 | 78.42 | 67.40 | |

Sources and Methodology: There is no census information which gives a directly meaningful breakdown between white and blue collar workers. As a result it is necessary to guess somewhat crudely, for some of the sectors, what the breakdown is. In the calculations effort I have two alternative estimates were made: Estimate A was the sum of "obreros" family helpers and an arbitrarily guessed at share of independent workers and employers. Estimate B was total minus the occupational categories "professionals, etc", "managers, etc.", office workers, vendors and a guessed at share of personal service workers and farmers. For estimate A in agriculture the estimate of the employer category was included; such a high percent seemed appropriate because the ratio of workers to employers was so low as to suggest that many of the employers were basically small farmers who also are small holders themselves. The only possibility for exception would be if a lot of these employers lived in towns.

In the sector of mining (Est. A) all of the four categories were included except for 501 people listed as professionals and also employers. In substituting the evidence was that most of the employers were blue collar workers; that the word artisans and operatives were listed as employers (population census p. 114); this included both manufacturing and construction and we assumed that 9,722 were in construction and 24.5 in manufacturing. Even so, this approach leads to an estimate of only a little over 70 percent blue collar total in this sector. But it must be remembered that the population census involves overstatement of the

Sources and Methodology for Table A-8 continued:

number of white collar workers; there is clearly an inconsistency between the 160,000 so categorized (p. 131) and the occupational breakdown (p. 139) which suggests that probably less than 100,000 workers might be white collar. A somewhat parallel apparent overstatement of empleados occurred in construction, although in absolute terms only 17.5 thousand people were so classified; with a more realistic definition (excluding transport workers, etc.) about 10,000 might be excluded and a figure of 95% arrived at, as in Estimate B. In general the B estimate would seem the more meaningful one.

The difference is particularly dramatic in electricity, water, etc., where a majority of workers had classified themselves as empleados, but did not appear to be doing white collar type jobs. Commerce is a special case, since a majority of the workers have as their major activity selling, although there is probably a reasonable amount of manual labor involved in their activity.

Services constitutes another somewhat problematic case in that personal service workers (primarily maids), are the bulk of this category; if all maids were classified as blue collar, which is a fairly plausible, the share of blue collar is as high as 97 percent; if one-half were defined as white collar less than 65 percent would fit the category.

TABLE A-9

UNEMPLOYMENT RATES BY OCCUPATION SOUGHT

| | Total Unemployment Rate | Previous Job Holder | Seeking First Time |
|---|---|---|---|
| Professional | 8.38 | 4.25 | 3.91 |
| Executive | 5.17 | 3.94 | .89 |
| Clerical | 26.38 | 13.52 | 12.66 |
| Sales Staff | 13.96 | 7.18 | 6.75 |
| Rural Workers | 6.98 | 6.59 | .27 |
| Miners | 15.5 | 13.52 | 5.36 |
| Transport Workers | 12.78 | 11.38 | .58 |
| Craftsmen | 17.02 | 13.33 | .41 |
| Laborers | 17.44 | 10.14 | 6.93 |
| Service Workers | 18.14 | 12.44 | 5.55 |
| Domestic Servants | 2.51 | 1.95 | .43 |
| Defence & Police | 1.00 | 3.04 | - |
| Others | 59.79 | 3.91 | 22.22 |
| Total | 15.5 | 10.14 | 5.36 |

Source: ILO, op. cit, data presented on page 346.

Table A-10

Urban Unemployment Rates, By Educational Level, 1970

| Educational Level | Previously Employed | First Time Seekers | Total |
|---|---|---|---|
| None | 3.07 | 1.11 | 4.18 |
| Urban Primary | 5.90 | 2.97 | 8.87 |
| Rural Primary | 2.36 | 1.21 | 3.57 |
| Basic Bachillerato | 5.87 | 6.60 | 12.47 |
| Classic Bachillerato | 5.18 | 6.70 | 11.88 |
| Technical or Vocational Secondary | 6.29 | 7.04 | 13.33 |
| Other Secondary | 10.57 | 6.50 | 17.07 |
| Normal | 2.65 | 4.92 | 7.57 |
| Higher | 4.55 | .89 | 7.44 |
| Other | 6.44 | 5.44 | 11.88 |
| Total | 4.57 | 2.93 | 7.50 |

Source:

DANE, Encuesta de Hogares, pg. 8.

## Table A-11

## Unemployment Indicators - U.S.

| Year | Unemployment Rate | Labour Force With Some Unemployment (%) | Labour Force With Some Unemployment but Excluding people working 50 weeks or more (%) | Labour Force with 15 Weeks or More of Unemployment (%) | Labour Force With 2 Spells Or More of Unemployment (%) |
|---|---|---|---|---|---|
| 1960 | 5.6 | 17.2 | 5.9 | 5.41 | 5.60 |
| 1961 | | 18.4 | 17.2 | 6.17 | 6.06 |
| 1962 | 5.6 | 18.2 | 16.8 | 5.70 | 6.22 |
| 1963 | | 16.7 | 15.3 | 5.25 | 5.45 |
| 1964 | | 16.2 | 14.9 | 4.71 | 5.48 |
| 1965 | 4.6 | 14.1 | 12.7 | 3.51 | 4.50 |
| 1966 | 3.8 (3.9) | 13.0 (12.9) | 11.6 (11.5) | 2.75 (2.72) | 3.90 (3.95) |
| 1967 | 3.8 | 12.9 | 11.4 | 2.60 | 3.75 |
| 1968 | 3.6 | 12.4 | 11.0 | 2.34 | 3.41 |
| 1969 | 3.5 | | | | |

Note: 1966 figures in parentheses correspond to the "old series" which ends in 1966, and which used as base people 14 and up; the series beginning in 1966 uses as base people 16 and up.

Source: Presidents Manpower Report, op.cit; various tables.

Table A-11.5

Urban Male Labor Force Distribution by Time Worked: Colombian and the U.S.[1] 1964 and 1968-70

| | United States | | | | Colombia | | | Urban Area, 1970 | |
|---|---|---|---|---|---|---|---|---|---|
| | 1964 | | 1968 | | Non-Agriculture: 1964 | | | | |
| | Total | Excluding People over 64 | Total | Excluding People over 64 | Total Non-Agri. | Age 15-64 | Seven Principal Cities, 1964 | ≥ 15 yrs. | (age 15-64) |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (10) | (11) |
| Participation Rate (Persons 16 and up) | 81.9 | 88.2 | 81.2 | 88.6 | 81.3[a] | 83.1 | | 74.5 | 79.1 |
| (Persons 14 and up) | 78.6 | | 77.9 | | | | | | |
| Percent of population working ≥ 50 weeks, full time[c] | 52.03[e] | | 56.35[a] | | | | | | |
| 27-49 weeks-full time | 10.14[f] | | 9.34[a] | | | | | | |
| 1-26 weeks full time | 6.29[f] | | 6.41[a] | | | | | | |
| Total, full time | 68.46[f] | | 72.10[a] | | | | | | |
| Part time | 10.06[f] | | 9.18[a] | | | | | | |
| Percent of total Possible Labor force Hours which were worked. | 63.6[f] | | 67.85[a] | | ≥ 61.98[2,δ] | | | 105.5 (90.18[h]) | 113.1 (95.77[h]) |
| Percent of Possible hours of People in Labor Force Workers | 80.95 | | 83.56[a] | | ≥ 76.24[2,δ] | | 80.00[d] | 79.34 (73.5[h]) | 84.26 (78.1[h]) |
| Percent Working 48 weeks or more full time | =68.2[3] | | | | 58.8[2,δ] | | | | |
| Full and part-time | =71.5[3] | | | | | | | | |

[a] 16 yrs. & up.

[c] 15 and up

[f] 14 and up

[δ] non-agriculture. (Census, p. 140)

[d] Average of the data for Bogota, Medellin, Cali, Barranquilla, Bucaramanga, Cartagena and Manizales. See DANE, Suberplee en las Siete Principales Ciudades del Pais, Bogota, 1967.

[e] Defined as "usually worked 25 or more hours per week." (ibid., p. 251)

[h] Assuming people working over 45 hours worked only 45 hours.

[1] For the U.S. the total male labor force is used.

[2] If our interpretation of the meaning of the "months worked figures in the 64 census is accurate, i.e. if people who worked 6 days in the census week still had to say how many months they worked in the year, while those working less than 6 days had the hours worked converted to monthly terms.

[3] Based on interpolation.

Table A-11.5 continued

Sources and Methodology: U.S. information comes from the U.S. Department of Labor, Manpower Report of the President, April 1971.

The figures for Col. 5 are from the 1964 population census; for 1964, figures are not available for the urban sector per se, but are presented here for the non-agricultural sector which corresponds fairly closely to the urban sector.

Cols. 11 and 12 are based on figures from DANE, Encuesta de Hogares, 1970.

In estimating the percent of possible labor force hours worked, it was assumed that 2 percent of the male urban labor force were family helpers (ayudantes familiares) and that they worked an average of 15 hours, and that 5 percent of the labor force worked less than the 15 hours which was the lower cutoff point for presentation in the published figures (it was impossible to deduce how many people might have been working less than 15 hours, but since very few were working 15-21 hours, it seemed that this number would be, rather surprisingly, quite small). Average hours worked in each of the categories was calculated by applying regional weights to the hours worked distribution for each region. Since so many people work more than the standard work week (45 hours) it seemed appropriate to make an alternative calculation where no one was assumed to be working more than 45 hours. (see footnote h). The figures in col. 11 are guesses, since there are no breakdowns available between age and hours worked; the assumption used here is that there is no relation between the two variables. In fact it might be that people over 64 tend to work less, and that therefore the figures in Col. 11 would be downward biased.

A comparable measures to that of Col. (10) is difficult for the U.S. since I have not located figures on hours worked for people who work more than the 35 hours considered standard. For production workers the Statistical Abstract indicates an average of 37.8 hours in 1968; no comparable figure is presented for white collar workers although it would probably be about the same. Meanwhile 8.61 percent of the (the non-agricultural) labor force is not remunerated (use of nonagricultural labor force here introduces some inconsistency with the figures of Cols. 1 through 4); if it were assumed that this group averaged 45 hours, then the average for people working full time would be only 38.5; it seems unlikely that the production worker figure includes many part time.

Table A-12

Labor Force of Eight Cities by Origin
1967
(thousands)

| | Total | Natives | | Immigrants | | | |
|---|---|---|---|---|---|---|---|
| | | | | Same Dept. | % | Other Dept. | % |
| Bogotá | 581 | 162.7 | 28.0 | 142.8 | 22.1 | 275.5 | 47.4 |
| B/quilla | 150 | | 90.3 | 60.18 | | 59.7 | 39.82 |
| B/manga | 81 | 31.5 | 38.9 | 38.1 | 47.1 | 11.4 | 14.0 |
| Cali | 212 | 71.4 | 33.7 | 53 | 25.0 | 87.6 | 41.3 |
| Ibague | 49 | 18.4 | 37.5 | 18.9 | 38.5 | 11.7 | 24.0 |
| Manizales | 66 | 28.5 | 43.2 | 22.8 | 33.0 | 15.7 | 23.8 |
| Medellin | 274 | 39.7 | 32.7 | 149.6 | 54.6 | 321.7 | 12.7 |
| Popayan | 221 | 11.6 | 48.5 | 6.3 | 26.3 | 6.1 | 25.2 |
| Total | 1,437 | 505.1 | 35.15 | 431.5 | 30.03 | 500.4 | 34.82 |

Table A-13

Urban Unemployment Rates by City and Department: 1964

| | Bogota | | | Cundinamarca | | | Antioquia | | | Valle | | | Atlantico | | | Caldas | | | Norte | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Age | Total | Men | Women | Total | Men | Women | Total | Men | Women | Total | Men | Women | Total | Men | Women | Total | Men | Women | Total | Men | W |
| <15 | 7.358 | 12.712 | 3.837 | 3.205 | 6.122 | .453 | 13.428 | 18.899 | 8.552 | 8.638 | 11.844 | 4.434 | 10.263 | 15.811 | 5.197 | 8.380 | 10.404 | 6.636 | 7.332 | 10.961 | 3. |
| 15-19 | 8.839 | 12.457 | 5.613 | 4.650 | 6.678 | 2.148 | 13.735 | 17.049 | 8.882 | 9.882 | 12.446 | 6.322 | 12.163 | 16.390 | 7.636 | 9.610 | 11.699 | 5.646 | 6.752 | 9.072 | 4. |
| 20-24 | 8.261 | 10.210 | 5.518 | 3.974 | 5.113 | 2.035 | 10.633 | 12.118 | 7.774 | 8.299 | 9.745 | 5.289 | 12.291 | 14.901 | 7.348 | 7.791 | 9.071 | 4.910 | 6.618 | 8.322 | 4. |
| 25-29 | 7.757 | 9.357 | 5.235 | 2.763 | 3.434 | 1.819 | 8.443 | 8.899 | 7.183 | 6.910 | 7.546 | 4.854 | 10.333 | 11.561 | 6.575 | 6.610 | 7.175 | 4.930 | 6.652 | 7.625 | 4. |
| 30-34 | 7.472 | 8.553 | 4.812 | 2.420 | 2.656 | 1.691 | 7.619 | 7.781 | 7.066 | 5.760 | 6.203 | 4.122 | 9.398 | 10.303 | 6.014 | 5.962 | 6.417 | 4.332 | 6.289 | 7.015 | 4. |
| 35-39 | 7.426 | 8.455 | 4.848 | 1.440 | 2.070 | 1.198 | 7.183 | 7.371 | 6.560 | 5.498 | 5.843 | 4.239 | 9.358 | 10.271 | 6.076 | 5.537 | 5.645 | 4.436 | 5.566 | 6.235 | 4. |
| 40-44 | 7.555 | 8.528 | 4.895 | 2.247 | 2.541 | 1.396 | 7.110 | 7.371 | 6.198 | 5.272 | 5.543 | 4.127 | 9.218 | 10.496 | 5.382 | 5.536 | 5.900 | 4.636 | 5.903 | 6.571 | 4. |
| 45-49 | 7.736 | 8.642 | 4.809 | 1.529 | 1.708 | 1.035 | 7.273 | 7.563 | 6.267 | 5.443 | 5.837 | 3.742 | 9.383 | 10.248 | 5.919 | 5.683 | 6.018 | 4.195 | 5.882 | 6.478 | 4. |
| 50-54 | 8.434 | 9.525 | 5.075 | 2.116 | 2.505 | .968 | 7.548 | 8.013 | 5.801 | 5.928 | 6.383 | 3.592 | 9.872 | 10.807 | 5.351 | 6.021 | 6.428 | 3.803 | 5.935 | 6.715 | 3. |
| 55-59 | 8.846 | 10.126 | 4.672 | 2.744 | 3.372 | .861 | 8.261 | 8.441 | 6.357 | 6.293 | 6.796 | 3.365 | 10.303 | 11.213 | 5.463 | [illegible] | [illegible] | 3.818 | 6.334 | 7.073 | 4. |
| 60-64 | 9.313 | 10.796 | 5.338 | 2.872 | 3.646 | .502 | 8.165 | 8.628 | 6.148 | 6.223 | 6.653 | 3.682 | 10.573 | 11.336 | 6.002 | 6.309 | 6.670 | 4.122 | 6.399 | 7.011 | 4. |
| >65 | 8.266 | 9.596 | 4.818 | 1.321 | 1.415 | 1.024 | 7.436 | 7.575 | 7.092 | 4.965 | 5.306 | 2.971 | 9.417 | 9.853 | 6.230 | 5.214 | 5.422 | 3.806 | 6.432 | 7.458 | 3. |
| Total | 8.219 | 9.586 | 5.179 | 2.875 | 3.504 | 1.481 | 8.998 | 9.630 | 7.304 | 6.913 | 7.621 | 4.886 | 10.476 | 11.884 | 6.497 | 6.799 | 7.447 | 4.784 | 6.342 | 7.482 | 4. |

Sources and Methodology: The figures are from the 1964 population census which, as is evident in the figures, has substantial incomparabilities with the samples. Although unemployment rates for young persons, especially males, are quite high in Bogota and Antioquia (presumably largely determined by Medellin), as well as in Atlantico, they appear to be somewhat below those registered in the sample, although perhaps not so dramatically as to imply that they are not of use. It is striking that female unemployment rates are very low in some of the younger age groups in Bogota, Valle, Atlantico, and especially in the cities of Cundinamarca apart from Bogota. No analysis has been performed to date, as far as I know, to ascertain why the figures differ from those of the samples; some of the difference is presumably due to the lower tendency to report first time seekers as unemployed in the census (evidence of this lower tendency was cited in Table ).

Table A-14

Occupational Mobility: Previous Jobs and Job Sought by "Cesante" Unemployed

| Occupation Sought \ Previous Occupation | Professionals and Executives | Office Workers | Salesman | Farm and Mine Workers | Transport Workers | Artisans & Blue Collar Workers | Services | Domestic | Police Defense, Vigilantes, etc. | Other | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Professionals and Executives | 81.3 | .9 | -0- | | 2.5 | .3 | .8 | | | 1.9 | 3.9 |
| Office Workers | 9.6 | 81.2 | 13.1 | 4.5 | | 5.1 | 2.8 | | 43.7 | 11.0 | 18.4 |
| Salesman | | 10.1 | 56.0 | 5.1 | | 3.9 | 5.8 | | 38.4 | 6.3 | 11.5 |
| Farm & Mine Workers | | | 1.6 | 29.0 | | .4 | | | | | 2.0 |
| Transport Workers | | | 1.4 | 8.0 | 87.2 | 1.5 | | | | 3.7 | 5.8 |
| Artisans and Blue Collar Workers | 1.1 | 6.0 | 19.6 | 20.0 | 3.8 | 85.4 | 16.9 | 17.1 | 21.9 | 15.8 | 43.2 |
| Services | 6.8 | .4 | 5.0 | 10.7 | | 2.6 | 70.4 | 18.0 | | | 10.2 |
| Domestics | | | | | | .3 | 3.3 | 64.9 | | | 2.3 |
| Police, Defence, Vigilantes, etc. | | | 1.0 | 1.7 | | | | | | 3.6 | .4 |
| Other | 2.0 | 1.4 | 2.3 | | | .5 | | | | 57.7 | 2.3 |
| Total | 100.0 | 100.0 | 100 | 100 | 100 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Sources and Methodology: Based on tables for the 8 cities studied in CEDE's 1967 unemployment surveys presented in Sa a and Ortega, Encuestas Urbanas de Empleo y Desempleo, op. cit., Table 6a to 6h. The CEDE analysis did not take an average for the cities; the table here presented a weighted average (with weights the relative labor force in each city).

Sources and Methodology for Table A-14 continued:

As can be seen, there is no overwhelming tendency for people either to scale down or scale up their aspirations with the passage of time, at least as judged by their statements of next job being sought in relation to last one. Obviously people at the top of the scale must have some average downscaling and people at the bottom some tendency to aspire upwards. Unfortunately this table gives very circumstantial evidence at best, as the categories are very broad, the incomes attainable in them overlap greatly, and there may be some misclassifying of individuals. All the table indicates with a certain amount of assurance is that there is some mobility by occupational category; with categories of the breadth used here it appears on average that 70-80 percent of people search for their new job in the same category and the remainder outside it. Only 6 percent of ex-office workers search for regular blue collar jobs in manufacturing, construction, and so on, while about 5 percent of the latter group are trying to go the other way. A much higher share of salesmen are searching for blue collar jobs; but here it is by no means clear whether the income change associated with such a shift would be upward or downward.

Table A-15

Composition of New Jobs and Aspirations of First Time Job Seekers.
1964-1970: Bogota

| | 1964 (census) | | | 1970 (sample based) | | | Implicit New Jobs 1964 - 1970 | | | Distribution of First Time Job Seekers | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | All Seekers Bogota: | Bogota: Seekers Unemployed Up to 4 weeks | Colombia: Seekers Unemployed Up to 4 weeks | Average of (11) and (12) = (13) | Previously Employed: Job Weeks Bogota | All Unemployed: up to 4 weeks, Bogota |
| | Men (1) | Women (2) | Total (3) | Men (4) | Women (5) | Total (6) | Men (7) | Women (8) | Total (9) | (10) | (11) | (12) | | (14) | (15) |
| Professionals - Technicians, etc. | 8.56 (25,237) | 9.786 (28,598) | | 12.13 (48,233) | 10.13 (63,597) | (35,957) | (34,360) | (16,959) | 6.5/7 (51,319) | 8.7 | 13.6 | 5.6 | | 0.0 | 3.9 |
| Managers, Owners (excluding Public Sector - including Self-employed in Commerce) | 2.87 | 1.238 | | 1.93 | 0 | | | | 0 | <0.8 | 0 | 0 | | 0 | 0 |
| Office (excluding Sales and Managers) | | | | | | | (30,521) | (41,065) | 21.19 (71,586) | 40.8 | 45.45 | 35.21 | 40.33 | 23.09 | 33.8 |
| Commerce + Sales (Including Managers) | 13.258 (45,261) | 7.Nº (19,750) | | ( | | (28,639) | (31,234) | (32,904) | 21.9% (74,138) | ≥15.0 | ≥18.2 | 22.54 | 20 37 | 5.4; | 9.1 |
| Agric. workers | 4.87 (16,632) | 0.51 (1 88) | (17,618) | 1.98 | 0.24 (838) | | — | — | — | 0 | | 0 | | 1.82 | 1.3 |
| Service Workers | 7.545 (25,764) | 49,258 (55,705) | (121,469) | 8.25 | 35.04 (122,125) | | (17,490) | (26,420) | 12ac (63,910) | 9.2 | 13.63 | 9.82 | 11.72 | 10.91 | 40.3 |
| Non-Agricultural workers | 49,553 169,157) | 15,011 (29,142) | (198,338) | 47.34 | 19.91 (69,456) | | (79,007) | (50,265) | 26.30 (115,272) | 23.8 | 9.09 | 26.77 | 17.93 | 50.91 | 10.4 |
| | | | | | | | | | | 4.2 | 0 | | | 1.82 | 2.3 |

Note: Figures in parenthesis are absolute numbers.

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Table A-15 continued

technical category, the commerce-salesmen category and the service worker category, and less people wanting to get into the non-agricultural blue-collar worker category than in fact did enter. In short, the figures would very strongly suggest that many people must have had to adjust their aspirations down. But the share who had to adjust their aspirations down would likely be overestimated by such a technique, since many service workers and non-agricultural laborers may get jobs almost immediately and do not show up in the unemployment statistics at all; in that case the figures simply reflect the fact that for some categories the waiting line is longer than for others. Circumstantial evidence on this question is provided by a comparison of the first time job seeker unemployment rate for periods up to 5 weeks with the average number of new jobs opening up every 5 weeks. An estimate of this latter would suggest, if every one were unemployed during this period, a zero to four week first time job seekers unemployment rate of 0.66; the rate observed in Bogota was about 0.91; its being above the theoretical maximum (if job creation had been constant over the period) could be related in part to the particulary high unemployment at the time of the 1967 sample, though Bogota has had a total first time job seekers unemployment rate above 4% consistently since late 1966. Unless the statistics are very misleading this conclusion would suggest that relatively few people are not for some period of time in the unemployed pool, and/or some repeat job hunters are included as first time job seekers,
or some such phenomenon.

Column 15, the percent distribution of all persons (whether first time job seekers or not) unemployed up to four weeks implies the same story as do columns 11 or 13, i.e. that the people searching for white collar jobs are 50% or more above the availabilities at any given point in time, while people searching for jobs in commerce and selling are normally below the number of new positions opening up (presumably because many of these are opened up as own account activities by individuals who did not go through an unemployed period prior to doing so) and the share of people looking for blue collar jobs is much less than the share of all job openings which are in that category.

Table A-15 continued

Sources and Methodology: The major difficulty in making the comparison presented here between the occupational composition in 1967 in Bogota, and the occupational composition of net new positions between 1964 and 1970, lies in incomparabilities in the occupational classification between 1970 and 1964. The classification is presented in more detailed fashion in the 1964 census than it is for 1970, so it is not possible to ascertain exactly how the two relate to each other. It appears from the implausible decrease in the share of "directors, managers, etc.", between the two years that the 1970 [illegible] breakdown included those directors and managers working in commerce in the 1964 "commerce and salesmen"; as a result that group has been so reclassified in the 1964 figures presented here. Even with this a considerable decrease in the "directors, etc." category has occurred, and presumably this is associated with misclassification in one or the other year between this group and either "professionals" or "administrators, etc." There are no particular good leads as to which it might be.

The 1964 totals presented exclude people searching for work for the first time, members of the armed forces and people not well classified. Altogether [illegible] an exclusion of over 10 percent, but the 1970 figure was decreased (relative to total 1970 labor force) by partly to make up for the fact that the net change in positions between the two years would be something of an underestimate of the new jobs coming up. The breakdown between males and females in the labor force was deduced from the tabulados of The Encuesta de Hogares.

The 1967 distribution of occupations sought by the unemployed corresponded to the 1964 census breakdown and therefore required some aggregation into the 1970 format. Presumably the same characterization of managers and directors as prevailing in the 1964 Census held; fortunately this (the non-comparability with 1970) does not lead to any problem since no one in this category was listed as first-time-job seeker unemployed.

One crude test relates the distribution by occupation of the first-time-job seekers who are unemployed to the distribution of new jobs available. The figures in Col. 9 give the distribution of new openings (allowing for the various difficulties of relating the 1964 and 1970 figures mentioned above) while columns 10-13 give different breakdowns of the first-time-job seekers. Table 10 in the distribution of these people found in the sample, regardless of time during which a job had been sought. (The equal to or greater-than signs relate to the fact that some of the people listed as directors could have been in the "commerce and salesmen" category). Column 11 gives the breakdown of people unemployed for 0-4 weeks in Bogota, Column 12 for the 8 cities together (weighted by the number of unemployed for this time period, in each city) and column 13 is an unweighted average of columns 11 and 12. Column 11 is not fully satisfactory for present purposes due to the small sample size, so the averaging with column 12 is designed to suggest possible deviations from the figures which a larger sample would have generated in column 11; but since Bogota is not typical of all the cities, column 11 may in fact be a better indicator than column 13. Bogota has, for example, higher shares of professionals and technicians, office workers and so on, and lower shares of blue collar workers, as evidenced in the differences between columns 11 and 12.

If the figures on first-time-job seekers (e.g. Col. 11) referred to a shorter period in time, so that it would be plausible to assume that a high share of entrants to the labor market would be unemployed for that period, then a comparison between columns 9 and 11 would indeed suggest a much higher share of people looking for white collar office jobs than new jobs coming available, a rough equality in the professional-

Table A-16

Relationship of First and Last (Before Sample) Occupational Category: Sample of Active Population in Five Colombian Cities
(Percentage Distribution)

| Occupational Category in last position (Sample Data) | Category of First Job: Professional, semiprofessional | Manager, upper level office workers | Lower level office workers | Owners of own business, salesmen | Specialized blue Collar workers | Semi specialized blue collar worker | Un specialized blue collar workers | Rural workers |
|---|---|---|---|---|---|---|---|---|
| Professional, semi-profesional | 74 | 31 | - | 4 | - | - | 1 | - |
| Manager, upper level office workers | 15 | 46 | 42 | 9 | 3 | - | - | - |
| Lower level office workers | 4 | - | 17 | 9 | 3 | 3 | - | 2 |
| Owners of own business, salesmen | 7 | 15 | 19 | 70 | 11 | 11 | 19 | 24 |
| Specialized blue collar workers | - | 8 | 13 | 4 | 74 | 29 | 13 | 11 |
| Semi specialized blue collar workers | - | - | 7 | 13 | 3 | 50 | 23 | 21 |
| Un specialized blue collar workers | - | - | 2 | - | 6 | 7 | 42 | 21 |
| Rural workers | - | - | - | - | - | - | 1 | 21 |
| TOTAL | 100 | 100 | 100 | 100 | 100 | 100 | 99 | 100 |
| Persons in Category | 27 | 13 | 59 | 47 | 35 | 97 | 69 | 82 |
| Number who, with high probability, moved up | 0 | 0 | 25 | 2 | 2 | 42 | 26 | 21 |
| Number who, with high probability moved down | 1 | 1 | 5 | 0 | 3 | 7 | 0 | 1 |

[illegible] Carlos, Movilidad Ocupacional, op. cit, p. 53, based on data from [illegible], Encuestas sobre Movilidad Ocupacional y Migración, 1967.

Table A-17

Non-Female Labor Force: Composition of the Non Paid Categories, 1964 and 1970[b]

| | Employers (1) | Independent workers (2) | Family Helpers (3) | Sum (1)+(2)+(3) |
|---|---|---|---|---|
| 1964 | | | | |
| Colombia | 1,866 | 17,612 | 3,206 | 22,484 |
| Bogota | 1,692 | 8,034 | 1,217 | 10,943 |
| 1970 | | | | |
| Atlantic Region | 3,556 | 28,050 | 5,338 | 36,944 |
| Eastern Region | 3,262 | 33,262 | 7,186 | 43,710 |
| Bogota | 1.99 | 13.77 | 4.50 | 20,260 |
| Center-West (Medellin etc.) | 0.908 | 15.44 | 1.561 | 17,909 |
| South | 1.982 | 37,473 | 7.067 | 46,522 |
| Colombia | n.a. | n.a. | n.a. | 25.92[a] |

[a] From Table 23; an indirectly derived figure.
b Figures expressed as percent of total female labor force.
Sources and methodology: The figures for 1964 come from the Population Census of that year. The 1970 figures are based on data in DANE, Encuesta de Hogares; they are deduced by making use of the (known) figure for the total female labor force in the region, with respect to this breakdown and the figure for the agricultural sector and the share of women in agriculture. Unfortunately since the absolute female labor force by region is not available, it is not possible to weight the regional figures to produce a national figure.

TABLE A-18

Regression Results on Unemployment - Participation Rate Relationship

Participation Rate: The Dependent Variable

Men and Women

| | | | |
|---|---|---|---|
| (1) | PR = 34.16 - 0.090U + 0.039T<br>(-0.88) (1.54) | $R^2$ = 0.88<br>D-W = 1.39 |
| (2) | PR = 34.43 - 0.182$U_{ccs}$ + 0.036T<br>(-1.204) (1.514) | $R^2$ = 0.110<br>D-W = 1.421 |
| (3) | PR = 34.55 + 0.020$U_{ccs}$ - 0.212T + 0.008$T^2$<br>(0.162) (-2.037) (-2.435) | $R^2$ = 0.281<br>D-W = 1.65 |
| (4) | PR = 34.46 - 0.097$U_{ccs}$ + 0.341$U_{asp}$ - 0.256T<br>(0.183) (0.245) + 0.009$T_2$ | $R^2$ = .335<br>D-W = 1.774 |
| (5) | dev. PR = 0.534 + 0.047U<br>(5.75) | $R^2$ = 0.53<br>D-W = 1.40 |
| (6) | dev. PR = 0.628 + 0.081U - 0.054T + 0.0014$T_2$<br>(9.47) (-4.87) (4.238) | $R^2$ = .817<br>D-W = .89 |
| (7) | dev. PR = 0.519 + 0.069$U_{ccs}$ + 0.014$U_{asp}$<br>(3.794) (0.657) | $R^2$ = 0.559<br>D-W = 1.868 |
| (8) | dev. PR = 0.543 + 0.063$U_{ccs}$ + 0.048$U_{asp}$ - 0.008T<br>(3.821) (2.024) (-2.455) | $R^2$ = 0.657<br>D-W = 1.564 |
| (9) | dev. PR = 0.630 + 0.082$U_{ccs}$ + 0.064$U_{asp}$ - 0.042 + 0.0012$T^2$ | $R^2$ = 0.776<br>D-W = 1.752 |
| (10) | PR = -6.38 + 40.19 dev.sU<br>(5.07) | $R^2$ = 0.53<br>D-W = 0.127 |
| (11) | PR = -8.55 + 41.70 dev.sU + 0.041T<br>(5.58) (2.03) | $R^2$ = 0.60<br>D-W = 0.177 |
| (12) | PR = -8.18 + 43.42 dev.U - 0.310T + 0.011$T^2$<br>(9.78) (-5.56) (6.45) | $R^2$ = 0.87<br>D-W = .613 |
| (13) | dev. PR = 0.391 + 0.610 dev.Usp - 0.0026T<br>(5.337) (-0.095) | $R^2$ = 0.564<br>D-W = 2.015 |

Men Only

| | | |
|---|---|---|
| (14) | PR = 46.53 - 0.118U - 0.031T<br>(-2.156) (-1.445) | $R^2$ = 0.127<br>D-W = 2.15 |
| (15) | dev. PR = 0.471 + 0.061U<br>(5.81) | $R^2$ = 0.595<br>D-W = 1.36 |
| (16) | dev. PR = 0.574 + 0.097U - 0.062T + 0.0019$T^2$<br>(10.73) (-5.92) (5.76) | $R^2$ = 0.85<br>D-W = 1.12 |
| (17) | PR = -4.61 + 49.64 dev.U<br>(8.08) | $R^2$ = 0.74<br>D-W = 0.462 |
| (18) | PR = -1.81 + 47.41 dev.sU - 0.036T<br>(8.51) (-2.58) | $R^2$ = 0.80<br>D-W = 0.541 |
| (19) | PR = -1.60 + 48.34 dev.sU - 0.230 + 0.0062$T^2$<br>(11.23) (-4.62) (3.992) | $R^2$ = 8.86<br>D-W = 1.016 |

Unemployment: The Dependent Variable

Men and Women

(20) $U = -3.03 + 0.248\ PR + 0.647T - 0.018T^2$ $R^2 = .413$
(0.705) (3.82) (-3.33) D-W = 1.568

(21) $U = -5.64 + 9.96\ dev.s\ PR + 0.708T - 0.018T^2$ $R^2 = .907$
(9.47) (7.53) (-6.233) D-W = .54

(22) $Uces = 2.49 + 0.040\ PR + 0.354T - 0.011T^2$ $R^2 = 0.396$
(0.162) (3.003) (-2.782) D-W = 2.00

(23) $Uasp = -6.43 + 0.233\ RR + 0.303T - 0.008T^2$ $R^2 = 0.459$

(24) $Uasp = -1.078 + 7.210$ $R^2 = 0.55$
(5.307) D-W = 1.272

(25) $Uces = -3.139 + 6.469\ dev.\ PR + 0.387T - 0.011T^2$ $R^2 = 0.776$
(6.33) (4.241) (-3.774) D-W = 2.355

(26) $Uasp = -2.612 + 3.754\ dev.PR + 0.296T - 0.006T^2$ $R^2 = 0.717$
(3.885) (3.43) (-2.375) D-W = 0.972

(27) $dev.sU = 0.263 + 0.016\ PR + .0005T$ $R^2 = .773$
(8.51) (1.79) D-W = 1.16

Men

(28) $U = 14.868 - 0.208\ PR + 0.523T - 0.016T^2$ $R^2 = .413$
(-0.707) (3.811) (-3.890) D-W = 2.16

(29) $U = -4.47 + 8.70\ dev.s\ PR + 0.662T - 0.020T^2$ $R^2 = .915$
(10.73) (8.85) (-8.41) D-W = .996

PR = participation rate
dev PR = deviation from a 3 period moving average of the participation rate
U = unemployment rate
Uces = unemployment rate of the previously employed
Uasp = unemployment rate of first time job seekers
T = time trend
Note: Figures in parenthesis are "t" values

TABLE A-19

REGRESSIONS YIELDING SIGNIFICANT RESULTS:
Analysis by [illegible]

| | Sex | Age | a | Coefficients $b_1$ | Coefficients $b_2$ | R | F | K | N-K-I | F-Level: Significance Relative to the Value at the Left |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Men & Women | 15-54 | 41.52 | -2.61* | -0.09 | 0.65 | 8.311 | 2 | 9 | 1% |
| | | | | (0.96) | (0.07) | | | | | |
| 2 | Women | 15-54 | 26.95 | -0.54 | -0.32** | 0.58 | 6.2993 | 2 | 9 | 5% |
| | | | | (1.17) | (0.09) | | | | | |
| 3 | Women | 45-49 | 23.70 | +2.66* | -0.12 | 0.54 | 5.2896 | 2 | 9 | 5% |
| | | | | (1.03) | (0.34) | | | | | |
| 4 | Women | 15-19 | 35.24 | +2.02* | -8.05 | 0.58 | 6.2688 | 2 | 9 | 5% |
| | | | | (0.91) | (0.25) | | | | | |
| 5 | Men | 45-49 | 97.12 | +0.48* | -0.05 | 0.42 | 3.3242 | 2 | 9 | N.E.S. |
| | | | | (0.09) | (0.07) | | | | | |

N.E.S. Not significant at the 5% level

* Significantly different from zero at the 5% level

** Significantly different from zero at the 1% level

( ) Standard error of coefficient

Source: Urrutia, op. cit., "El Desempleo Disfrazado...", page 47.

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