

REGIONAL DIFFERENCES IN THE INDUSTRIAL STRUCTURE IN PUERTO RICO

Since the beginning of World War II, economic growth in Puerto Rico has proceeded at a rapid rate and at present it is considered to be in an intermediate position between the underdeveloped and the developed countries. This economic prosperity has been attributed mainly to the initiation and implementation by the local government, with the assistance of the United States Government, of a series of measures directed to improve the levels of living of the population.¹ The results of the implementation of such measures can be seen by taking a quick look at some indices of social and economic development (Table 1). From 1940 to 1970, the crude death rate decreased 3 times, while the infant mortality rate decreased 4 times that of the initial date. It can be observed also a considerable increase in the per capita income from as low as \$121 in 1940 to \$1234 in the fiscal year 1968-69. On the other hand, the proportion of the labor force in agriculture shows a decreasing tendency which resulted in a value for 1969 that was 4 times less the value for 1940. All these figures reflect the conversion of the Island from a typical agrarian underdeveloped society to an industrialized developing one.

However, this economic growth has not been shared equally by all areas within the Island. The great migratory movements, both internal and external, registered in the Island during the period 1940 to 1960 are a reflection of this unequal sharing of the economic development. These migratory movements have been the result mainly of the deterioration of agriculture and the precarious conditions of small farm enterprises together with the growth of urban

¹These measures comprise what is known as the "Operation Bootstrap" Program and covered five different aspects: the provision of social services, the development of public utilities and highways, private construction and aids to private construction, the encouragement of manufactures, and assistance to the rural population.

industrialization.¹ Their effect on the population distribution has been to increase the urban population by 51.7% during the period, while the rural population has remained almost stationary. But this urban growth has been greatly concentrated in the metropolitan areas of the Island, especially in the Metropolitan Area of San Juan. From 1940 to 1960, the proportion of the total population in this area increased from 16.2 to 25.6 respectively. How much of this increase is a result of internal migration is reflected in the fact that in 1960 more than one-half of the residents of the area were migrants from other areas of the Island.

As was mentioned before, economic growth in Puerto Rico (as in other areas) has brought deterioration of the agricultural industries and the growth of non-agricultural industries. Thus, it has been marked by changes in the kind of work people do and by a shift in the realignment of the industrial and occupational structure of the Island. This shift has been one from relatively unproductive to relatively more productive activities and as a result, the increase in total population employed has not been significant. Another peculiar change that has marked our economic growth has been an increase in the number of working women, usually employed outside of agriculture. Total employment increased 18% during the decade of 1940-1950 but declined 8% during the intercensal period 1950-1960. Thus, employment rose only 9% during the last 20 years, product of an increase of only 47,000 during the period. The increment in female employment was greater than in male employment, both in absolute and relative terms. This difference by sex can be explained by the fact that the type of industries that have been established on the Island have been "light" industries which involved chiefly apparel manufacturing where females are preferred.

¹José L. Vázquez, The Demographic Evolution of Puerto Rico (Unpublished Dissertation, University of Chicago, June 1964).

Despite the growth of non-agricultural industries in Puerto Rico during the period 1940 to 1960, the volume of reported unemployment has changed only slightly and remains high. According to the data of the 1940 census, 15.1 of the labor force was unemployed, while the figures for 1960 revealed an unemployment of 11.6 per cent. This small decline between the two dates has been, to a great extent, a result of a more rapidly declining trend in female unemployment. In the male group, unemployment has decreased less and at present, it is considerably higher than in the female population.¹ (See Table 3)

Several important conclusions emerge from the above discussion. It seems that the economic development program of Puerto Rico has affected only slightly the total number of jobs and has failed to check chronic unemployment, while the female population has been the most benefited from the resulting changing industrial and occupational structure.

How different and to what extent have the structure of manpower in different regions within the Island changed as a result of the economic growth undergone by the Island is something that deserves special attention. This will be the main focus of this paper. Our analysis will be mainly focused on the structural changes undergone by the industrial composition in some regions of the Island. In this way we will have some indication of the areas in which economic development and job opportunities have been more concentrated.

The data will be analyzed in terms of four different regions in which the Island has been divided: each of the three Standard Statistical Metropolitan Areas (SSMA) designed by the United States Census Bureau and a fourth region which we have called the 'Rest of the Island', and which comprises all the municipalities not included in the three SSMA's.²

This is an arbitrary regional division. However, it will serve us to analyze our area of main interest, the Metropolitan Area of San Juan, in terms of how far apart it is from the other two major centers of urbanization and development (Ponce and Mayaguez) and from the agglomeration of the less urbanized areas (Rest of the Island).

¹For a more detailed analysis of labor force in the Island, see: A. J. Jaffe, People, Jobs and Economic Development (University of Columbia, 1959), and Jose L. Vazquez, The Demographic Evolution of Puerto Rico (Unpublished Dissertation, University of Chicago, 1964).

²According to the 1950 and 1960 Censuses, the SSMA of San Juan was composed of 4 "municipios": San Juan, Bayamon, Cataño and Guaynabo; the Mayaguez and Ponce SSMA's are coextensive with their respective municipios; and the Rest of the Island includes the other 71 municipios of the Island. The 1970 Census, however, extended the SSMA of San Juan to include two more "municipios": Carolina and Trujillo Alto.

Also it is based in our believe that due to locational and cultural factors they represent different regions within the Island.

Due to limitations of time we will make our analysis just for the years 1950 and 1960¹. This will be disadvantageous in two ways:

- 1) our comparative analysis in time will be limited just to two years impeding us to have a broader view of the tendencies, and
- 2) a very important period in the economic growth of the Island will be left out. This period is the decade of the forties, which was when economic development started to gain impetus.

An analysis by sex for each region will be made due to the fact that females have become an important component of the labor force, both in terms of its participation and because they have benefited more from the changes that have occurred in the industrial composition.

Labor Force Participation

An analysis of labor force participation by region seems relevant first so as to have an insight into the general changes that have occurred among the regions. A look at Table 4 reveals some interesting features of the differences in labor force participation by region and sex for specified periods and over time. It can be observed that the male labor force participation for all the regions fluctuated between 65 and 71 per hundred and between 63 and 67 per hundred in 1960. All of the regions show decreases in their respective percents. The greatest one occurred in the Rest of the Island Region, where it decreased from 70.6 to 63.3.

A somewhat different pattern is observed among females. As opposed to the males where the range of variation of the rates among the regions was not so great (6 percent in 1950 and 4 percent in 1960), the labor force participation

¹Our main sources of data will be the Censuses for 1950 and 1960

for females shows a much wider range. It goes from 19.0 to 35.2 in 1950 and from 16.6 to 27.2 in 1960. The inferior and superior values in 1950 correspond to the Rest of the Island and the Mayaguez region respectively; while in 1960 they correspond to the Rest of the Island and San Juan region. Changes over time for females indicate that the rate has increased only in San Juan, while in the Rest of the Island and the Mayaguez region, it has decreased. This decrement has been very marked in the last region mentioned, where it decreased from 35.2 to 22.7. The female participation rate for the Ponce region, however, has remained almost stationary as it happened with males.

Although the main purpose of this paper is not to go into the analysis of the causes of the variations in the structural components of the labor force, but rather that of changes in the industrial composition, we will try to elaborate somewhat on it since variations in the structure of the labor force will have an impact on the industrial composition. The differences observed in each year, as well as over time, are a result of the effect that both internal and external migration have had on the labor force population of the different regions. Emigration in Puerto Rico has considerably depleted the population of the productive ages, especially those in which labor force participation tends to be high. Calculations of the expected labor force in the absence of emigration for 1950 and 1960 shows that the 1950 labor force population of the Island was only 86% of that expected in the absence of emigration (expected was 820,000 persons as compared with an "actual" number of 704,000). Both male and female labor force groups were reduced by 14%, whereas the greatest reductions for both sexes occurred in the age interval 25-35 years during the period 1940-1950. On the other hand, in 1960 the difference between the expected and the enumerated labor force population was around 334,000

persons, representing the cumulative effect of 2 decades of heavy emigration. Emigration, since 1940, had reduced the 1960 expected labor force population by almost 35%. The reduction was 36 percent for males and 25 percent for females.¹ Emigration had but little effect upon the sex ratio in the total population during the decade of 1940-1950. The ratio was 101 males for each 100 females in both the expected and enumerated population. However, there was a higher proportion of males among emigrants during the period 1950 to 1960 and as a result the sex ratio in the total population declined from 101 in 1950 to 98 in 1960. This proponderance of male emigrants during the decade of the 50's was probably a result of the tendency of the new small industries to provide more job opportunities for females than for males.

Although the methods for estimating internal migration are not too accurate, several conclusions can be drawn.² During the period 1940-1950, only 7 out of the then 77 municipalities of the Island gained population by in-migration. Among the 70 municipalities recording an out-migration balance, five had a rate of over 30 percent. During this decade even Ponce and Mayaguez, who ranked second and third among the Island's urban places, lost by out-migration. During this decade, out-migration was concentrated among the municipalities of the central part of the Island, while in-migration was common among the municipalities adjacent to San Juan, the Capital.

During the decade 1950-1960, the same pattern was maintained with the exception that only 5 municipalities gained by in-migration.

¹ José L. Vázquez, The Demographic Evolution of Puerto Rico, op. cit., pp. 135-141.

² The formula used to compute internal migration doesn't separate this from external migration. Thus, any result for a given municipality or region will be the net product of internal and external migration.

Internal and external migration have worked in such an intricate fashion that it's hard to separate the effects of one from those of another. However, it is evident that since 1940, internal migration has been eclipsed by external migration. This can be seen in the fact that during the 1940-1950 decade, only 27% of the net loss of the 70 municipalities was gained by the other 7 municipalities, while in the decade 1950-1960, only 14% of the net loss of the 72 "municipios" that underwent out-migration was gained by the other five. The difference between these figures and 100% resulted in external migration.

All the above discussion leads us to derive some explanations for the differences and tendencies observed among regions. Up to 1950, the Rest of the Island region had the highest labor force participation rate, but during the decade of the fifties when external migration reached its highest peaks, this was the most affected area so its labor force population was reduced to a larger extent than that of the other areas. Also, this was the area most affected by reduction in the employment in agriculture, thus it has the highest "pushes" for emigration.

The reduction in the labor force participation rates of all the regions is a reflection also of the decreases experienced by the male labor force due to external migration. Since external migration during this decade has been heavily weighted by male migration, it is possible that this fact has reduced the male labor force even in those areas where a positive net in-migration was observed, like the San Juan and Ponce regions. The positive net in-migration balance observed in these regions might be the result of the predominance of females among internal migrants, which counteracted the depletion of the male group.

The big differences observed in the labor force participation rate among the regions, although reduced are kept over the period and probably result from differences in the job opportunities available. The fact that the female labor force participation rate increased for the San Juan region might be a reflection of the fact that it was this region the one that received more immigrants, the majority of which were females in the productive ages, These immigrants come from the Rest of the Island and Mayaguez regions, which as a result reduced their labor force participation.

Industrial Structure

The simple dichotomy of the industrial composition into agricultural and non-agricultural industries in Table 5 shows, that in both years, male workers in agriculture is mainly concentrated in the Rest of the Island Area where it comprises 63.5 and 46.2 per cent of the total labor force respectively. The Ponce and Mayaguez areas, on the other hand, show quite similar proportions of their labor force employed in agriculture in both years and these are much lower than those of the Rest of the Island, San Juan has the lowest proportion working in agriculture and over the decade this proportion decreases from 10.3 in 1950 to 3.3 in 1960.

The proportion of females engaged in agriculture shows a similar pattern and tendency as that observed for males with the exception of Mayaguez which shows a slight increase over the decade. However, the proportions are insignificant in comparison with those of males.

The labor force distribution by sex and region in the non-agricultural industries shows, as is to be expected, opposite patterns and tendencies as those observed in agriculture. For both males and females, San Juan has the highest proportion, while the Rest of the Island has the lowest and Ponce and Mayaguez have an intermediate position.

For females, the percentages for each region exceed 90 and the differences among them are insignificant. Increases occurred in both sexes (except for Mayaguez) over the decade,

In Table 6, we have further divided the non- agricultural industries into manufacture and services following Kuznetz three sector division. ¹ Marked differences by region and sex can be observed. The percent of male workers engaged in the manufacturing industries in 1950 is almost the same for the three metropolitan areas (over 35%, while that for the Rest of the Island is much lower (17%). All the regions experienced increases in this proportion over the decade, but the Ponce and Rest of the Island Areas had the largest increases. As a result, in 1960 Ponce had the highest proportion and the Rest of the Island had the lowest but somewhat closer to those of the other regions.

The service industry does not show so uniform proportions among the three metropolitan areas. San Juan shows the highest percent followed by Mayaguez and Ponce respectively. The Rest of the Island has the lowest one. There are increases over the decade in all the regions but the same pattern among regions is maintained

~~The pattern is different among females. Mayaguez shows the highest percent in the manufacturing industries while San Juan has the lowest. The reverse is true for the service industry.~~

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1. The three main sectors include: agriculture, fisheries, forestry and trapping; industry proper- mining, manufacturing, construction, power and light utilities, transportation and communication; and services- trade, finance real estate, personal, business, domestic professional and government.

The proportion of females in the manufacturing industry decreased in all the regions except that of San Juan, while personal services increased in all the regions except that of San Juan.

Thus, this pattern conforms to the normal one expected to occur with economic development, at least with respect to males: a decreased in the labor force in agriculture, and an increase in the secondary and tertiary sectors.

However a more detailed analysis of the industrial composition and its changing pattern will throw out more light into the differences by region. It is a common belief that some industries appear to vary in importance with the level of economic development. It is hypothesized, for example, that the magnitude of the proportion employed in retail trade declines as the types of services provided by wholesale trade and by finance, insurance and real estate components increases¹. We will try to see to what extent the San Juan Metropolitan Area exceeds the other areas in terms of its proportion in and within each industry and of the changes occurred during the decade, so as to analyze how well this conforms to the commonly observed pattern.

In order to attain this objective we used a more detailed classification by industry². The results obtained can be observed in Tables 7 and 8.

~~In terms of the seven major non-agricultural industries in Table 7 some~~
differences emerge among the regions. In the three SMSA's and for both years,

¹
Ann R. Miller, International Variations in the Industrial Distribution of the Labor Force: A Preliminary View (Discussion Paper, University of Pennsylvania, 1971)

²
We used the classification by industry developed by the Population Studies Center, University of Pennsylvania.

manufacturing, commerce and services show the highest proportions for male workers. Each of these industries shows increases over the decade except commerce in Ponce and Mayaguez whose proportion decreased and San Juan whose proportion remained the same. However, the order of importance of these three industries within each region varies. While in San Juan, the service industry ranks first in importance followed by commerce and then manufacturing, in the other two regions manufacturing ranks first in importance followed by commerce and then services. This is true for both years except in Mayaguez in 1950 where commerce was slightly higher than manufacturing.

The construction and transportation and communication industries follow the preceding three in order of magnitude. However, whereas the proportion of workers in the construction industry increases over the decade in all the areas, especially in Mayaguez, where it increase from 8.5 to 18.6, that of the communication and transportation industry either decreased or remained the same in all the three metropolitan areas.

The pattern and tendency observed in the rest of the Island Region is somewhat different. First, there is no such wide range of variation among the industries as that observed in the other areas. This is true for both years, although in 1960 the differences among the proportions in the different industries are more marked. But in general, the same industries predominate, namely: manufacture, services and commerce.

The proportion of the male labor force within the service industry shows some interesting differences among regions. The community, business and recreation subgroup have expanded along with the economic development in all the regions. This has been mainly due to increases in the educational services since both the medical and the community services have decreased in almost all the regions. It is an interesting point that the educational services represent the highest proportion in Mayaguez and the Rest of the Island, while the subgroup of other community and recreation servi-

ces has the highest proportion in San Juan and Ponce. This difference might be an indication of differences in economic development among the regions.

Within the transportation and communication industry males are mainly concentrated in the transportation subgroup, although there is a decreasing tendency over time. Ownership of automobiles in Puerto Rico have become common so it might be that, as it has happened in the most highly industrialized societies, the transport function have started to move back into the household.

The commerce industry shows a major representation in the retail industry as is expected, but it experienced some decreases over the decade, while the finance and real estate industry experienced some increases.

Within the manufacturing industries, there are marked differences by region. First of all, San Juan has a much lower proportion of its male labor force in the food and beverage subgroup than the other three areas and while this proportion remained stable for San Juan over the decade, it decreased considerably in the other three. The textile, footwear and apparel group, although showing a much lower proportion, also show the same tendencies. This is true except for the Rest of the Island where the proportion increased instead of decreasing. The metal industry shows remarkable increases in all the areas while the machinery industry shows remarkable reductions in all the areas.

The female labor force is mainly concentrated in three industries: ~~manufacturing commerce and services.~~ However, whereas in San Juan and Ponce the service industry contains the major proportion of the labor force in both years, in Mayaguez it is the manufacturing industry. The Rest of the Island Region switches from manufacturing in 1950 to services in 1960 as the industry with the major proportion of the labor force. The proportion of the labor force in all the industries in the San Juan Area show increases except that in the service industry. In the other three regions, all industries show increases in its labor force except the manufacturing industries.

A further subdivision of these industries into its main components reveal similar patterns and tendencies for almost all the regions. Within the service industry, the government and the community and recreation services show increases in all the regions while the personal services show decreases. This diminishing of the personal services is due to the considerable reduction undergone by the domestic services during the decade and which has been common to the whole Island.

Within the community, business and recreation services, it is interesting to observed that the proportion of women engaged in the educational services has decreased in the Ponce and Mayaguez Area and increased in the other two areas, while the health services has increased in the Ponce and Mayaguez Area and decreased in the other two. It is hard to explain such a complex tendency. Both the education and the medical services tend to be important sources of employment for females so it might be possible that this factor, together with the importance that is given within each region are working together to produce these effects.

The communication services take a bigger share of the labor force among women than the transportation services. However, this share is much bigger in the Mayaguez and Rest of the Island Area than among the other two. Over the decade, the percent of women in the communication industry shows increases in all the regions except the Rest of the Island. The increase that occurred in the Mayaguez area is considerably marked: from 58.6 to 82.4. Thus, it seems that while communication has been increasing in importance as a source of work for females in the three metropolitan areas, transportation has been gaining importance in the Rest of the Island.

The observations within the commerce industry conform to what is expected in a developing country. Most of the female labor force within this industry is en-

gaged in the wholesale and retail division. However this proportion either declines or remains the same in all the regions. Within the wholesale and retail division, it is the retail industry which comprises the majority of the workers. However, it is observed also a decreasing tendency in this industry in all the regions. Trading is an important source of employment for women and in 1960 24 per cent of its labor force were females. This might be a reflection of the fact that trading is typically a family enterprise.

All the preceeding results lead us to draw some conclusions with respect to regional industrial structure and economic development. It seems that there are still big differences between San Juan and all the other areas in terms of its industrial composition, although some of these differences are reducing with time. The biggest differences exist between San Juan and the Rest of the Island while Ponce and Mayaguez occupy an intermediate position.

The differences within the non- agricultural industries are a result of the types of industries that have been established in the Island and where they have been placed. This also have had a great influence on the differences observed by sex. Whatever reason has been responsible, it is evident that San Juan has profited more than the Rest of the Island from the opening of new job oppor-

tunities. Its share in the total labor force employment by industry far exceeds 30 percent in most of the industries. The only two industries that have less than 30 percent employed in San Juan are mining and manufacturing. The proportion of the total labor force in each industry working in San Juan is highest for the "growth" industries. ¹ The government services also shows very high proportions, but this is due to the function of San Juan as capital of the Island. It is interesting to observe that there occurred increases in the proportion of workers employed in the personal services and within it there were increases in all the subcategories, even in the domestic services in San Juan. This was true for both sexes. Probably there has been a greater demand for domestic services due to the fact that more women are now working out side and this demand has been filled with the great amounts of labor force supply that have crowded this area.

To have a better picture of the concentration of these industries in the different regions we calculated an index of concentration. The results are shown in Table 9. This index relates the percent of workers in each industry group and in each region to the percent of workers in that industry in the country as a whole. The index is equal to unity where the proportion of a region's labor force in a specific industry is the same as the proportion of the whole country's labor force employed in that industry. Indexes different from one indicate the degree to which employment on a particular industry is over represented or under-represented in a particular region.

In terms of this definition of the index we can say that for males in 1950, all the industries were either overrepresented or equally represented in the metropolitan areas of San Juan and Mayaguez, while in the Rest of the Island all the industries were underrepresented except the mining industry. The Ponce Area range intermediate between these two extremes with some industries overrepresented and other underrepresented.

The changes that occurred over the decade altered this pattern somewhat. Although the San Juan Metropolitan Area still is overconcentrated with respect to almost all the industries, it is so in a lesser degree. In fact, with respect to the manufacturing industry it is still slightly underconcentrated. The Rest of the Island Region showed increases in the concentration of all industries, but almost all of them except mining are still underconcentrated.

With respect to females the picture is more complex. In 1950 all the industries were overconcentrated in the San Juan area except manufacturing. However, in the Mayaguez and Rest of the Island Region, all the industries were underconcentrated except the manufacturing and electricity industries.

The tendencies over the decade are diverse and do not show a particular pattern. The female labor force shows decreases in its degree of concentration in all the industries except the manufacturing industry. Ponce shows increases in the manufacturing and in the electricity industries. Mayaguez shows increases in all the industries except manufacturing and commerce. Even though these increases occurred every industry within these two regions remained under concentrated except the commerce industry for Mayaguez.

TABLE 4. RELATIVE LABOR FORCE STATUS FOR PUERTO RICO, ITS STANDARD STATISTICAL METROPOLITAN AREAS AND THE REST OF THE ISLAND, 1950 AND 1960.

	1950					1960				
	Puerto Rico	San Juan SMSA	Ponce SMSA	Mayaguez SMSA	Rest of Island	Puerto Rico	San Juan SMSA	Ponce SMSA	Mayaguez SMSA	Rest of Island
<u>Both Sexes</u>										
Total 14+	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Labor Force	45.5	46.1	42.1	51.1	45.2	41.6	46.1	41.6	42.0	39.7
Not in Labor Force	55.5	53.9	57.9	48.9	54.8	58.4	53.9	58.4	58.0	60.3
<u>Males</u>										
Total 14+	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Labor Force	69.8	68.7	66.7	65.1	70.6	64.5	66.8	66.1	63.2	63.3
Not in Labor Force	30.2	31.3	33.3	34.9	29.4	35.5	33.2	33.9	36.8	36.7
<u>Females</u>										
Total 14+	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Labor Force	21.2	24.8	19.6	35.2	19.0	20.0	27.2	19.8	22.7	16.6
Not in Labor Force	79.8	75.2	80.4	64.8	81.0	80.0	72.8	80.2	77.3	83.4

Source: United States Census of Population, Puerto Rico (53).

TABLE 5. PERCENT DISTRIBUTION BY REGION OF THE AGRICULTURAL AND NON-AGRICULTURAL INDUSTRIES, PUERTO RICO, 1950 AND 1960.

Region	Agricultural Industry				Non-Agricultural Industry			
	Males		Females		Males		Females	
	1950	1960	1950	1960	1950	1960	1950	1960
Puerto Rico	48.9	31.5	3.0	1.8	51.1	68.5	97.0	98.2
San Juan	10.3	3.3	.4	.2	89.7	96.7	99.6	99.8
Ponce	27.4	14.3	.7	.3	72.6	85.7	99.3	99.7
Mayaguez	24.8	16.5	.6	.9	75.2	83.5	99.4	99.1
Rest of Island	63.5	46.2	4.7	3.1	36.5	53.8	95.3	96.9

Source: U.S. Census of Population 1950 and 1960, Puerto Rico (53).

TABLE 6. PERCENT DISTRIBUTION BY REGION AND SEX OF THE LABOR FORCE IN THE AGRICULTURAL, MANUFACTURING, AND SERVICE INDUSTRIES, PUERTO RICO, 1950 AND 1960.

	Agriculture		Manufacturing		Services	
	1950	1960	1950	1960	1950	1960
<u>Males</u>						
Puerto Rico	48.9	31.5	23.0	33.8	26.4	33.2
San Juan	10.3	3.3	36.9	42.3	51.3	53.4
Ponce	27.4	14.3	36.6	48.0	34.9	36.8
Mayaguez	24.8	16.5	36.7	42.7	37.3	40.6
Rest of Island	63.5	46.2	17.1	28.2	17.7	23.6
<u>Females</u>						
Puerto Rico	3.0	1.8	40.6	30.5	54.5	65.0
San Juan	.4	.2	16.5	22.4	80.7	76.4
Ponce	.7	.3	33.2	25.4	63.7	74.2
Mayaguez	.6	.9	66.4	45.2	31.5	53.5
Rest of Island	4.7	3.1	49.9	36.0	43.6	56.3

Source: United States Census of Population 1950 and 1960, Puerto Rico (53).

TABLE 7. PERCENT DISTRIBUTION BY REGION AND SEX OF THE LABOR FORCE
IN THE DIFFERENT INDUSTRIES, PUERTO RICO, 1950 AND 1960.

	Puerto Rico		San Juan		Ponce		Mayaguez		Rest of Island	
	1950	1960	1950	1960	1950	1960	1950	1960	1950	1960
Males										
Agriculture	48.9	31.5	10.3	3.3	27.4	14.3	24.8	16.5	63.5	46.2
Mining	.3	.3	.4	.2	.2	.2	.3	.3	.3	.4
Manufacturing	11.2	15.4	13.6	15.2	21.4	25.2	19.7	21.4	9.2	14.2
Construction	6.2	10.9	12.5	13.8	6.7	10.8	8.5	28.9	4.0	9.6
Electricity	1.4	2.5	2.7	3.6	1.5	2.7	1.5	11.9	1.0	2.0
Commerce	12.4	14.2	21.3	21.3	19.0	18.6	20.1	3.0	8.8	10.4
Transp., Com.	5.6	6.2	10.1	9.3	10.0	10.7	9.6	19.5	3.6	4.2
Service	13.0	18.1	28.0	30.1	12.6	15.2	14.3	18.4	8.4	13.1
Government	41.8	37.9	44.6	39.1	26.1	23.9	22.4	24.0	42.5	39.3
Serv. necessary	27.7	35.3	28.0	34.8	33.3	44.3	37.7	49.7	25.9	33.6
Personal serv.	30.5	26.9	27.4	26.2	40.6	31.8	39.6	26.3	31.7	27.1
Actually not specified	1.1	.9	1.1	.9	1.1	.9	1.2	.4	.1	1.0
Females										
Agriculture	3.0	1.8	.4	.2	.7	.3	.6	.9	4.7	3.1
Mining	-	-	-	-	-	-	-	-	-	-
Manufacturing	39.4	28.0	14.3	18.5	31.3	23.7	65.5	43.4	49.2	34.5
Construction	.2	.7	.4	1.3	.2	.3	.1	.2	.1	.4
Electricity	.3	.5	.6	.9	.2	.5	.2	.4	.1	.3
Commerce	6.8	11.4	10.9	15.7	8.6	13.5	5.7	12.6	4.8	7.8
Transp., Com.	.9	1.5	1.7	2.1	1.7	1.5	.6	1.1	.5	1.0
Service	47.4	53.4	69.6	60.6	54.8	60.0	25.8	41.0	38.5	48.4
Government	9.0	10.9	12.5	15.5	4.0	6.9	5.6	8.3	7.0	7.5
Serv. necessary	37.7	51.1	31.2	45.0	40.3	55.7	38.3	56.0	43.0	55.7
Personal serv.	53.3	38.0	56.3	39.5	55.7	37.4	56.2	35.7	50.1	36.7
Actually not specified	2.0	2.7	1.9	.9	2.4	.1	1.5	.3	3.8	4.6

Source: United States Census of Population 1950 and 1960, Puerto Rico (53).

TABLE 8. PERCENT DISTRIBUTION WITHIN DIFFERENT INDUSTRIES BY REGION, PUERTO RICO, 1950 AND 1960.

	Puerto Rico		San Juan		Ponce		Mayaguez		Rest of Island	
	1950	1960	1950	1960	1950	1960	1950	1960	1950	1960
Males										
Manufacturing	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Food & Bev.	47.6	34.9	25.9	26.0	43.2	34.1	43.7	38.1	58.5	38.8
Text	11.3	12.1	8.4	9.6	12.7	8.9	25.4	16.1	10.4	13.5
Metals	3.0	16.8	5.4	26.8	8.4	13.9	2.5	14.9	1.2	12.8
Machinery	12.4	3.5	19.9	6.4	12.2	5.7	11.4	1.9	9.3	1.9
Other Mfg.	25.7	32.7	40.4	31.2	23.6	37.3	17.1	28.9	20.6	32.9
Commerce	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Wholesale & Ret.	95.4	92.5	92.5	88.6	94.7	92.2	96.5	95.4	97.4	95.8
Wholesale	14.2	22.1	21.5	28.3	16.3	25.1	13.9	21.2	8.7	16.6
Retail	85.8	77.9	78.5	71.7	83.7	74.9	86.1	78.8	91.3	83.4
Other Commerce	46.6	7.5	7.5	11.4	5.3	7.6	3.5	4.1	2.6	4.3
Transp., etc.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Transportation	93.0	88.5	89.8	84.4	94.6	92.3	94.8	91.5	95.1	91.2
Storage & Comm.	7.0	11.5	10.2	15.6	5.4	7.7	5.2	8.5	4.9	8.8
Services	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Gov. Serv.	41.8	37.9	44.6	39.1	26.1	23.9	22.4	24.0	42.5	39.3
Armed Forces	23.2	28.5	24.3	1.2	2.9	36.0	2.7	-	24.4	-
Other	76.8	71.5	75.7	98.8	97.1	64.0	97.3	-	75.6	-
Comm., etc.	27.7	35.3	28.0	34.8	33.3	44.3	37.7	49.7	25.9	33.6
Education	31.8	35.8	23.4	26.3	23.4	28.1	45.8	52.0	40.1	44.8
Medical	28.3	25.6	31.5	27.2	31.9	33.7	21.5	19.5	25.3	23.4
Other	39.9	38.6	45.1	46.5	44.7	38.2	32.7	28.5	34.6	31.8
Personal	30.5	26.9	27.4	26.2	40.6	31.8	39.6	26.3	31.7	27.1
Domestic	27.6	12.7	25.9	12.0	34.8	17.4	38.7	24.1	26.8	11.8
Restaurant	43.1	48.7	44.1	47.4	34.7	44.6	26.2	32.1	45.5	51.9
Others	29.3	38.6	30.0	40.6	30.5	38.0	35.1	43.8	27.7	36.3

TABLE 8 (Cont.)

	Puerto Rico		San Juan		Ponce		Mayaguez		Rest of Island	
	1950	1960	1950	1960	1950	1960	1950	1960	1950	1960
Females										
Manufacturing	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Food & Bev.	3.0	4.6	6.1	5.1	1.5	18.5	1.5	2.8	2.4	3.4
Text	85.5	66.0	74.1	59.5	86.1	51.9	96.6	83.7	85.3	67.9
Metals	.1	.5	.4	1.2	.4	1.2	.1	.5	.0	.2
Machinery	.4	5.8	1.7	9.5	.6	6.7	.2	.6	.2	4.8
Other Mfg.	11.0	23.1	16.8	24.6	5.4	21.9	1.6	12.5	12.1	23.7
Commerce	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Wholesale & Retail	89.0	85.1	83.6	79.3	86.2	86.9	92.6	92.6	94.9	92.4
Wholesale	10.6	12.6	16.0	16.8	9.5	11.2	8.8	8.6	5.8	7.9
Retail	89.4	87.4	84.0	83.2	90.5	88.8	91.2	91.4	94.2	92.1
Other Commerce	11.0	14.9	16.4	20.7	13.8	13.1	7.4	7.4	5.1	7.6
Transp., etc.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Transportation	31.8	32.1	39.0	38.4	33.3	32.3	41.4	17.6	18.9	23.7
Storage & Comm.	68.2	67.9	61.0	61.6	66.7	67.7	58.6	82.4	81.1	76.3
Services	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Gov. Serv.	9.0	10.9	12.5	15.5	4.0	6.9	5.6	8.3	7.0	7.5
Armed Forces	1.6	2.0	1.8	.9	.6	-	.7	-	1.3	4.6
Other	98.4	98.0	98.2	99.1	99.4	100.0	99.3	100.0	98.7	95.4
Comm., etc.	37.7	51.1	31.2	45.6	40.3	55.7	38.3	56.0	43.0	55.7
Education	62.1	62.8	51.1	51.5	49.7	48.8	62.0	59.0	70.8	73.8
Medical	29.7	28.3	34.8	33.2	39.2	41.7	28.0	33.1	25.4	22.2
Other	8.1	8.9	14.1	15.3	10.9	9.5	10.0	7.9	3.8	4.0
Personal	53.3	38.0	56.3	39.5	55.7	37.4	56.2	35.7	50.1	35.7
Domestic	89.3	65.5	88.7	67.0	88.1	66.1	89.4	57.1	90.0	64.5
Restaurant	4.6	9.7	3.3	8.9	4.3	9.8	2.6	6.4	6.2	10.7
Others	6.1	24.8	8.0	4.1	7.6	23.5	8.0	36.5	3.8	24.8

Source: United States Census of Population, 1950 and 1960, Puerto Rico (53).