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**Employment in Industrial Free Zones  
in the Dominican Republic:**

**A Report with Recommendations  
for Improved Worker Services**

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## **Preface and Acknowledgements**

As part of a major reshaping of its development assistance program in the Dominican Republic, USAID has been making substantial loans for infrastructural construction in Industrial Free Zones (IFZs). The level of activity in IFZs has been increasingly rapidly in recent years, in response to improved local and international operating conditions for export producers located in the Zones. IFZs offer the Dominican Republic important national benefits in the shape of generation of export revenues and creation of employment at low cost in domestic resources.

USAID/DR has developed a policy on the optimal development path for IFZs from a managerial perspective, but the nature of employment in the Zones and the benefits to the Dominicans, mostly women, who supply labor to IFZ producers, had been little explored. The International Center for Research on Women was accordingly asked by USAID/DR to prepare a report on employment in the Zones and to make recommendations for improvements in worker services. These activities were not to involve USAID/DR in any major expenditure, but to form recommendations to be passed on to existing organizations active in the Zones. While not to be set as conditions on future infrastructural grants and loans, the recommendations could be expected to carry weight with recipients of these funds. ICRW carried out the work under the terms of its cooperative agreement with AID's Office of Women in Development of the Bureau for Program and Policy Coordination. (PPC/WID).

The ICRW team consisted of Susan Joekes, Staff Economist, and Quintina Reyes, ICRW Fellow. The team visited the Dominican Republic from July 31 to August 17, 1986. The time was spent collecting economic data, visiting all four Zones in operation and two others under construction, and interviewing the managers of a sample of 12 out of the total of 124 firms located in the Zones.

The report which follows describes current worker services and the position of women working in the IFZs in the Dominican Republic, in the light of what is known from secondary sources of the current state of the labor market and the

specificities of women's employment situation. The recommendations presented in chapter 6 rest on the twin pillars of information garnered during the field visit about the current situation in the IFZs, on the one hand, and analysis of the actual and prospective employment situation as it affects women, on the other.

One input lacking in the recommendations is a systematic appraisal of the views of women (and men) workers in the Zones themselves as users of IFZ services. Nor is the statistical picture of the socio-economic situation of workers in the IFZs presented in this report fully up to date; most of the relevant survey data dates from 1981, and it is possible (though unlikely) that the rapid expansion of the Zones in the last two years has drawn in a new segment of the labor force. The short duration of the field visit unfortunately made it impossible to carry out an original survey of workers' priorities for improvements in services or to compare the present day workforce with that of five years ago. Follow-up work into the design of the project recommendations, whether undertaken by USAID itself or carried out by IFZ based institutions, may need to include an initial survey of Zone workers to verify these points. In particular it is important to have more information on the nurturing responsibilities that women have to manage in addition to holding down wage employment.

ICRW wishes to thank those who helped to make the work of the field trip in August 1986 so rewarding. There were too many for all to be named. As well as the managers and entrepreneurs who were kind enough to give us interviews, but who have to be anonymous for reasons of confidentiality, the following were especially helpful: Debra MacFarland and Toni Christiansen-Wagner of the USAID Mission in Santo Domingo, whose idea it was to commission the study, made good suggestions for field visits and provided many kinds of practical help; Arelis Rodriguez, of the Consejo Promotor de Inversiones, was extraordinarily helpful in suggesting contacts and setting up most of the interviews in the IFZs; Gerold Janka generously shared with us the results of his comprehensive study of operating conditions in the Zones; Eddy de Luna, Luis Manuel Tejeda, jr, David Paiwonsky, Alejandro Ripoll and especially Arturo Peguero gave us much of their time in interview and provided invaluable information about individual zones; and Magaly Pineda, Sara Cetin, Isis

Duarte and Helen Safa gave us much information on the situation of women in the Dominican Republic based on their own research work and field experience.

## Chapter 1

### Introduction: the employment problem in the Dominican Republic

#### 1.1 The structural legacy.

Until recently, the strength of the Dominican economy has lain in primary commodities: the cultivation of a high value cash crop (sugar) and the exploitation of minerals (gold, silver and ferronickel). In most of the decade 1970-1980, the economy performed well by any standard, with GDP growing at 7 percent a year on average, 4.4 percent a year in per capita terms (IDB 1985). Nevertheless the country has experienced severe economic difficulties in the past ten years, of which the proximate cause was the collapse in the prices of these commodities in the world market.

Partly prompted by the commodity price falls, but also partly as a means of modernizing the Dominican economy, the government has taken steps over the past five years or so to improve the country's productive capacity and change the traditional pattern of product specialization. Although by 1986 there were distinct signs of success in this direction, in which Industrial Free Zones have played an important part, the process has been socially disruptive and economically costly in the short run.

The main arena in which the decline of the primary sector and the process of adjustment have created difficulties is the labor market. Each factor has contributed to a major problem of unemployment. In the first place, as a background condition quite apart from the collapse of international prices in the early 1980s, the labor absorptive capacity of the primary commodity sector has been failing. The minerals sector is extremely capital intensive: while producing, at its peak in 1980, 5% of GDP and 35% of merchandise exports, mining employed a mere 0.1% of the labor force (IDB, 1985). More importantly, the labor absorptive capacity of traditional, cash crop agriculture has been falling with mechanization and the introduction of other labor displacing technological changes, especially in the cultivation of sugar, by far the single most important crop.

No other productive sector has the potential to absorb labor profitably on the required scale. In terms of employment, the services sector had grown rapidly over the previous two decades; by 1980, 35 percent of the labor force was in the tertiary sector (IDB 1985). To that extent it demonstrably had a crude capacity to generate jobs. But as in other countries in the Latin American and Caribbean region, the majority of jobs provided low incomes at low productivity levels, and most analysts consider that the sector harbored an indeterminate share of concealed unemployment. On balance, the tertiary sector was probably more a contributor to the employment problem than a solution to it.

Industry employed 20% of the labor force in 1980. While far smaller than the tertiary sector, the quality of the jobs it provided was superior in terms of wages and hours of work, and the level of labor productivity was relatively high. The expansion of industry therefore provided the most hopeful avenue for employment creation. But arithmetically, the growth of the sector had to be very rapid to have a significant impact on employment. Moreover, much of industry was capital intensive and inefficient, having grown up in the 1970s behind protective barriers on imports. Local industry had virtually no capacity to export: in the late 1970s only about 3 percent of local industrial production was exported. If jobs were to be created at low capital cost in Dominican industry, new, more labor intensive activities (and small scale, artisanal industries) had to be encouraged.

To the extent that the long term prospects for labor were not good in the primary sector, and the prospects for expansion of employment opportunities elsewhere were not strong, unemployment was a problem in the making, even in the 1970s when national economic growth was strong.

As it turned out, the difficulties of making structural changes to the Dominican economy were greatly intensified by the recession in the industrialized countries and the consequent depressed state of the international economy as a whole in the 1980s. Promotion of exports had a crucial role in the adjustment scenario. In the face of reduced earnings from traditional exports, the government borrowed heavily on the international

financial markets to maintain imports of consumer goods and capital and intermediate production inputs for the restructuring effort, and to support the level of economic activity. An increase in foreign exchange earning capacity was essential in order to service the external debt: by 1982 the debt service ratio had reached 23% (IDB 1985). Furthermore, as a small country, the Dominican Republic could not in any case expect to be self-sufficient in consumer or capital goods. But reflecting the recession in the industrialized countries, and in stark contrast to the buoyant 1960s and 1970s, demand for non-traditional goods weakened worldwide after 1980. In 1982 the value of world trade in manufactures actually declined for the first time in more than thirty years (World Bank 1985a).

In these circumstances, external indebtedness had the effect of rapidly sharpening and drawing out the social costs of the economic transformation. The pressure to make Dominican exports competitive on the one hand, and the exigencies of maintaining international creditworthiness on the other, led to successive devaluations of the peso from 1983 to 1985. While the value of exports did later increase, the non-traditional export sector was too small to have a major effect on the overall growth rate. The immediate impact of devaluation was increased inflation, additions to production costs, contraction in the level of activity in construction, manufacturing and agriculture, and erosion of the value of personal incomes.

The result of this conjunction of forces was that underutilization of the labor force had become an acute as well as a chronic problem for Dominican development. In recent years open and concealed unemployment have risen with the rise in the official unemployment rate and the expansion of the tertiary sector. Also the quality of employment opportunities for the national labor force has deteriorated, with most new jobs coming in the low paid, low productivity parts of the tertiary sector, often under the guise of self-employment. For those in formal employment, real wages have fallen.

In this context, Industrial Free Zones (IFZs) can be considered as an instrument of the economic transition in the Dominican Republic. IFZs are areas of land designated for light industrial production of goods for export, by companies which operate under special dispensation, exempted from the

normal set of taxes and customs duties and regulations. The expansion of IFZs is in fact a central element in the policy package, expected to contribute towards several goals and objectives of the adjustment and restructuring. In the first place, Zone based production would contribute to the goal of increasing gross foreign exchange earnings by way of expansion of non-traditional manufactured exports. It would also help meet the objective of increasing and upgrading productive capacity in industry, and improving its technological level, since production would be efficient in international terms. The industries already operating in the Dominican Zones (typical of Zone production in other developing countries) are labor intensive, and expansion creates jobs at relatively low capital cost.

To what extent the Zones add to net as opposed to gross foreign exchange earnings, and whether the policy is a cost effective way of reaching the first three of the four objectives - and whether these objectives, as they stand, are appropriate for the national economy - is not the subject of this report, though some of the issues involved are touched upon (see particularly chapter 5).

In view of the scale of unemployment and underemployment the objective which weighs most heavily from a social perspective is employment creation. To what extent can expansion of the zones alleviate unemployment? What kind of employment will be provided and at what income level? Will the beneficial employment effects be long lasting, or short lived? How will women be affected? This report examines the characteristics of zone expansion in the light of these concerns, and goes on to recommend measures to enhance their employment creating effect.

## 1.2 The labor supply side

Dominican unemployment is exacerbated by a rapid growth of labor supply. The underlying rate of growth of population is high: the total population grew at 2.9 percent annually between 1960 and 1981 (Ramirez et al, 1982). The

youthfulness of the population results in rapid actual and prospective increases in the number of Dominicans of working age. Moreover, the labor force participation rate has been steadily increasing within these age groups. Accordingly, over the twenty period from 1960 to 1980 the economically active population grew at 4 percent a year. From 1980 to 1990 the rate will fall, but still reach 3.2 percent a year (op cit). On both measures, the Dominican labor force has increased unusually rapidly, compared to other countries in the region. The labor force grew at 2 percent a year from 1960 to 1980 in middle income Latin American and Caribbean countries, and is predicted to increase at 2.9 percent annually from 1980 to 2000 (Hopkins, 1983).

The driving force behind the increase in the Dominican labor force is changes in women's economic behavior, specifically in women's increasing involvement in the labor market. Male and female formal participation rates are becoming more similar. The male rate has been declining slightly, as older men withdraw for retirement more commonly than before and younger men undertake more education. The rate of participation in the male population of 15 years and over fell from 91% in 1960 to 81% in 1980 (Baez 1985). The female participation rate is changing far more markedly; it increased nearly fourfold over the same period, from 11% to 38% among women aged 15 years or more (Baez 1985).

The limitations of statistical data on women's economic participation are well known (see e.g. Anker R 1983 and Beneria L 1981). In particular, they are not to be taken as a measure of women's level of involvement in the economy. Rather, official participation rates mainly indicate the extent to which women are involved in paid employment on a contractual basis. In this sense, there is a slow but steady upward trend in the proportion of women joining the formal labor force in the developing countries as a whole. Between 1950 and 1985 the recorded share of adult women in formal employment rose, from 37% to 42% (ILO/INSTRAW 1985).

The direction of change in the female participation rate in the Dominican Republic is therefore in line with changes in other countries. But the rate of change in women's labor force participation is clearly unusually high in

international terms. From a low base, female participation in the Dominican Republic has almost reached the developing world average. But the world figure is heavily weighted by East and Southeast Asian countries, where female participation rates have always been high. The Dominican rate now surpasses the average for the Latin American region. The crude participation rate (i.e. the number of women in the labor force as a percentage of the total female population, including children), was about 20% in 1980, compared to 15% in the region as a whole (Bloom and Freeman 1986).

Even so, there is plenty of scope for the rate of female labor force participation to continue rising in the Dominican Republic. For young adult women in particular, participation rates in the industrialised countries are of the order of 50% higher than Dominican rates (ILO/INSTRAW 1985). Furthermore, present official data seriously underestimate the real female labor force participation rate through miscategorization of women who are not currently active.

According to statistical convention, non-active people are either seeking work, in which case they are classed as unemployed and counted as part of the labor force, or as not currently seeking work, in which case they are reckoned "inactive", and excluded from the labor force. People's decision as to seek work in this sense is sensitive to their perception of the probabilities of finding employment. As the rate of unemployment rises, the non-active are increasingly deterred from seeking work (and the official participation rate is depressed).

The rate of unemployment is higher for women than for men in the Dominican Republic, and it is quite likely that more women than men are deterred from seeking work in this way. The real pool of women available to the labor force is therefore probably larger than the official statistics indicate. Some empirical evidence supporting this proposition and giving orders of magnitude of the underestimation the available female labor force is presented in chapter 2.) If female employment opportunities increase, whether because of specific demand for female labor or as a result of a general increase in labor demand, more of these unrecorded unemployed women will seek work overtly, and boost the increase in the female participation rate. The urgency of

employment creation as an objective of national economic policy becomes all the more pressing as a result.

### 1.3 The current employment situation.

This analysis of the underlying and immediate forces affecting the labor market suggests that the unemployment problem should be a major concern of Dominican policy makers. Yet information is scarce on recent developments in the labor market. This makes it difficult to assess, in particular, the impact of the recent adjustment measures on the level of employment.

The national economic situation deteriorated drastically during the three years following 1980. The terms of trade declined sharply, as the prices of country's main exports fell on the one hand and the cost of imports, particularly oil, increased; the rate of investment and of growth in GDP declined, so that per capita incomes began to fall, reversing the gains of the previous decade; and the government faced severe liquidity problems in the shape of external debt and public sector deficits. The rate of growth of GDP fell back from an average of 7% from 1971-80 to 4% in 1981, 1.7% in 1982, 4% again in 1983, and 0.6% in 1984 (IDB 1985). The merchandise trade deficit increased from \$187m US in 1978 to \$269m in 1979 and \$558m in 1980. In 1981 cuts in imports and a good sugar price held the deficit down to \$264m; but in 1982 the unit value of sugar exports fell by almost half, and the deficit rose again to \$490m, where it remained for the next two years (data is available only up to 1984 (World Bank 1986, IDB 1985)).

In the late 1970s and early 1980s the foreign exchange reserves were depleted and foreign debts were accumulated on the private international capital markets to service these rising deficits. But these measures were not enough to turn the situation around. In 1983 and 1984 the Government was forced to introduce an austerity and adjustment program, designed to bring in fundamental economic policy changes, in order to receive financial support from the International Monetary Fund. These new credits allowed much of the private external debt to be refinanced on less onerous terms. The IMF inspired austerity package included a number of monetary and fiscal measures, but it was centered on exchange rate reform and an expected devaluation of the

peso. The package was intended to increase public sector revenues (which were very low in international terms as a proportion of GNP) through higher domestic taxes and high interest bond issues, to restrain imports through outright bans of some products and increases in the cost of the rest following devaluation of the currency, and, again as a consequence of the devaluation, to promote exports, particularly of non-traditional items.

Reform of the exchanges entailed the elimination of the dual exchange rate system which lay at the heart of the import substituting bias of economic policy throughout the 1970s. Foreign currency transactions were channelled by the Government through one of two markets, the "official" and the "parallel" markets, with different peso prices of foreign exchange (the US dollar being the most frequently purchased hard currency). In the official market the peso was held at parity with the US dollar. In the parallel market the exchange rate was influenced to some extent by supply and demand and had offered a constantly increasing premium on the dollar. Importers with access to the official market had a huge cost advantage over those required to use the parallel market rate. The Government had a complex system of allocation of access to the markets according to the products concerned. Importers of essential consumer products and intermediates, such as medicines, basic foodstuffs and petroleum, and of capital goods, had access to cheap foreign exchange through the official market; imports of other items was done with currency purchased in the parallel market. On the other hand, exporters were required to deposit all foreign currency earnings in the official market, to be reimbursed in pesos at a disproportionately low rate compared to that they could have obtained in the parallel market.

The increasing scarcity of foreign exchange associated with the soaring trade deficits in the late 1970s had forced the Government to limit access to the official market for importers, and transfer increasing numbers of products to the parallel market. The changes carried out under the austerity program were represented the consolidation of this trend, and the eventual unification of the exchange rate with the closure of the official market in April 1984 (except that oil imports continued to be financed at a preferential rate, at first with dollar parity, later the same year with a 50 percent premium). The

peso settled at about 2.80 to the U.S. dollar in the new unified market in the course of 1984, with surprisingly little fluctuation.

Whatever the long term effects of the austerity package prove to be, the short term impact on economic activity and incomes was extremely harsh. The measures produced shortages and price increases in consumer goods, and credit shortages and high interest rates which depressed investment in both the public and the private sectors. The cost of import products that had still been handled through the official foreign exchange market in April 1984 (including many basic foodstuffs and medicines) almost doubled when that market ceased operations. The increased price of oil imports later in the year had a pervasive impact. Inflation increased from 7% in 1982 and 1983 to 24% in 1984 and 38% in 1985. In terms of the level of productive activity, the manufacturing sector, largely dependent on imported inputs, was hardest hit: output increased only 1.7% in 1983 and fell by -3% in 1984. With the credit squeeze and cost increases, but the continuation of some public sector programs, the construction sector proved erratic; output fell by -3.9% in 1982, increased 14.8% in 1983, but fell back again to an increase of 2.8% in 1984 (IDB 1985).

The level of employment is determined by the level of economic activity in conjunction with the production technologies in use, which are sensitive to relative prices. Although the changes in 1983 and 1984 were expected to redress the fundamental capital-intensive bias of previous economic policy, and thus to encourage employment creation and the eventual modification of the economic structure to conform more closely to the local factor endowments, the adjustment program probably had an immediate negative impact on employment. Unfortunately, it is impossible to assess this fully, since although there are some data on employment for the first three years of the 1980s, there are virtually no data on the period since 1983. The most comprehensive information on the labor market is found in the census of 1980. This gives base-line data, as far as assessing the effects of the recession and adjustments of the 1980s are concerned. In 1990, according to this source, open unemployment was 19 percent in the urban labor force, 16 percent for men, 24 percent for women (see Table 2).

A pair of studies of employment patterns in Santo Domingo, carried out by the national statistical office, ONAPLAN, in 1980 and 1983 (the 1983 study was commissioned by PREALC)(ONAPLAN, 1983) is the best source of comparative data. In 1980 the population of the Santo Domingo district had somewhat higher activity rates, and also higher unemployment levels, than the urban population as a whole (see Table 2). Over the next three years in Santo Domingo there was a slight rise in open unemployment, and an increase in the share of the labor force in tertiary sector employment, accentuating the preexisting trend. Unemployment in the capital rose from 20.7% to 21.4% between 1980 and 1983. Average real earnings fell by 6.2% between 1980 and 1983 for those still in employment (op cit) . The share of the urban labor force in personal services doubled from 10% to 20% between 1970 and 1980; the share in the services sector as a whole increased from 42% in 1970 to 60% in 1980. In Santo Domingo in 1983 the share in the services sector was 69% (see Table 3).

At the same time the sex composition of the urban labor force changed significantly, reflecting the different rates of change in the participation rate by sex mentioned earlier. Within the employed labor force, the movement was more pronounced, with small but revealing differences between the sexes in the incidence of unemployment. The male unemployment rate rose marginally, from 17.7% to 18.1% from 1980 to 1983, while the female rate fell from 26.1% to 25.3% (see Table 2). Accordingly, the share of women in the employed labor force continued to rise.

Changes in the structure of employment during this period were also differentiated by sex (not in this case to women's benefit). There was a larger movement of women out of contractual employment into own account work. In Santo Domingo, the share of the female labor force in own account work increased from 7.7% in 1980 to 12.6% in 1983 (see Table 4), against an equivalent decline in the numbers of women in wage employment. Own account employment is of differing value to men and women. For women, it mostly comprises work in low income services; for men, it generally indicates operation of a small scale enterprise or family business. Though direct wage data by economic sector is lacking, the distribution of income among employed women is known to have deteriorated more sharply than it did for men. Between 1980 and 1983 in Santo Domingo there was a slight increase in the share of the

employed female labor force earning less than RD\$200 per month, from 55.1% to 56.0%, compared to a fall in the share of men in employment falling into this lower part of the income distribution, from 46.7% to 43.2% (see Table 5).

These changes in the pattern and structure of employment are reminiscent of the types of changes that have taken place in earlier recessions in the industrialised countries, and seem also to be happening in the Latin American and Caribbean region in the 1980s.

In times of recession, women's involvement in the labor market increases, in developed and developing countries alike, relative to men's. On the labor supply side, economic contraction provokes increases in female participation. As households suffer reductions in real income with increases in male unemployment and lower real wages, more women, previously unemployed, actively seek paid work to help keep up family income. On the labor demand side, the interactions between the structure of production, the sex segregation of occupations and the differential effects of economic cycles on particular sectors result in the relative buoyancy of women's occupations during economic contractions. Women are more strongly represented in the services than in the manufacturing sector, for example, which tends to be directly affected by the general economic cycle. (It is also possible that in recessions manufacturing enterprises put cost considerations before sex-typing of occupations, and that dismissing male before female workers, and bringing in female rather than male workers to new openings.) We have noted however that the services sector in developing countries includes many low productivity jobs, providing under- rather than full employment, and to that extent women's gains may be more apparent than real.

The changes in employment noted for 1980-83 in Santo Domingo, though small in absolute amount, are quite striking for a such a short period, which in the main predated the impact of the austerity and adjustment program. The changes in the economic environment and the adjustment measures taken since 1983 are likely to have intensified the pressures on the labor market. There is no direct data however on employment after 1983. There is no information on changes, if any, in labor force participation rates. Informed observers all agree that open unemployment has probably risen, but vary in their estimates

of the extent of the increase. The USAID estimates current unemployment at 28 percent (USAID, 1986), while another estimate is much higher (40 percent) (Free Zone Authority, Inc, 1986). Whatever the actual level, there is no doubt that the alleviating unemployment is the most urgent priority for Dominican development, for social, political and economic reasons.

#### 1.4 The importance of IFZs to national employment objectives

The importance of Industrial Free Zones to the DR in this context is twofold. First, they represent a low capital cost form of employment creation, one moreover where the immediate financial capital is committed from abroad. There is some local resource cost, of course, in the shape of the development infrastructure and the foregone tax revenues through various sorts of exemptions that are offered to foreign investors. Secondly, IFZs employ mostly women, and thus are a specific way of meeting the relatively high demand for employment that exists among women.

The following chapters explore in detail the specificities of women's economic position, the nature of employment creation in the Zones, and the operating and production conditions facing IFZ producers insofar as they are likely to determine the future course of expansion in the Zones. The report concludes with a number of recommendations for improvements in worker services in the IFZs which USAID/DR might consider sponsoring in the hope of increasing the beneficial employment related effects of Zone expansion.

## Chapter 2

### The Economic Status of Women in the Dominican Republic

#### 2.1 Wage work and socio-economic status

It is increasingly accepted in the literature on women in development that paid employment is a necessary condition for improvements in the socio-economic status of low income women. Paid employment may well not be a sufficient condition: without an evolution in legal instruments, and better access to political and managerial office and to education and training for women, women's progress towards equality will be blocked. But without economic empowerment by way, in the first instance, of women's claims to individual income on a contractual basis, legal and other reforms in favor of women will be fruitless. Intra-household income claims (i.e. statutory payments to individual household members, particularly women, out of total household income) are unlikely ever to be sufficiently formalised to fulfill this function. Women's best prospect for attaining an individual income stream lies in the sale of their labor in wage employment.

There are both theoretical and empirical arguments to support this view (Sen 1985). Money is exchangeable for other commodities; by extension, a monetary payment is perceived as a more substantial contribution to household income than women's normal efforts as provision of goods in kind (such as prepared foods) or laboring in household maintenance tasks. Along with the perception of greater contribution through monetary payment goes a larger say in household decision making and greater bargaining power within the household by virtue of threat of withdrawal of the payment. This increased status enlarges the woman's claims on the share of consumer goods within the household - and family income itself is increased by her wage income. Numerous empirical studies point to the importance of outside employment in improving the treatment that women get in society in general and in the household in particular.

## 2.2 Female labor force participation and employment rates.

In the light of these ideas, it is a positive development that the growth of the Dominican economy has been associated with increasing numbers of women seeking and finding paid work in the formal labor force instead of working unpaid in the home. By 1980, the labor force participation rate among women 15 years and above was 37.5%, double the rate of twenty years before (see Table 1). As noted above, this rate of female labor force participation is quite high compared to other countries in the region. The desire, ability and need of large number of Dominican women to hold paid employment is now a fact of Dominican economic life.

Not all women who seek paid work manage to find it. Women have consistently suffered higher rates of recorded unemployment than men in the Dominican Republic. In 1980 in urban areas male unemployment was 16.3% but of female unemployment was 24.6% (through there is evidence that the gap has narrowed subsequently and women's unemployment rate has fallen slightly (see Table 2)). The rising participation rate among women therefore cannot be taken simply as a measure of women's success in finding paid work; it has to be discounted by the incidence of unemployment. But even so, many more Dominican women now work for pay than in the past, both in absolute numbers and relative to the size of the total female population and to the numbers of men working.

The 1980 national census data on women's economic activity rates is supplemented by two other sources of information. First, the studies of the labor market carried out in Santo Domingo, in 1980 and 1983 by the national statistical office, ONAPLAN, cited in chapter 1, include estimates of the participation and employment rates in the adult population of the city, disaggregated by sex. They show, first, that labor force participation rates were slightly higher in Santo Domingo than in other urban areas of the country, for both men and women, but so also were rates of unemployment. (see Table 2). Second, the rate of participation among women rose markedly over that three year period, from 36.3% in 1980 to 39.3% in 1983 (see Table 2). This represents an increase above the trend of continued but smaller rises in the female participation rate from 1980-90, compared with the 1970s, included in one authoritative forecast of labor supply (Ramirez, 1982).

As discussed in chapter 1, the economic recession and the damaging effects it had on personal and household incomes probably provoked this incremental increase in women's participation. The general economic situation has deteriorated since 1983. In all likelihood, the rate of participation among women will probably have continued to rise, and it may now be far higher than the available data suggest.

The second source of information on women's economic activity is a study, again limited to Santo Domingo, of a sample of women aged 20-39 years, carried out in 1978 (Gurak et al, 1980). (It is a comment on the scarcity of data on the labor force and employment in the Dominican Republic that this study, now nearly nine years old, is still a major source of information.) The results of this study are consistent with the other studies carried out at around the same period, fleshing them out in some important respects.

According to this survey, 33% of women in Santo Domingo aged 20-39 years were currently employed in 1978. More intriguingly, another 31% had worked at some time previously. For comparison, the census implies a similar current level of female employment (as opposed to participation) among women of this age of 36% in 1980 in the country as a whole (calculated from Baez 1985)(footnote).

[Footnote: this calculation is crude, applying the average total female unemployment rate to the economically active population in different age groups, whereas age-specific unemployment rates should properly be used. If unemployment is above average for women aged 20-39 (in 1970 this was the case (see Overholt et al, 1984), then the resulting figure would be lower and more consistent with the survey findings.)]

Most but not all women in the labor force, as officially recorded, are currently employed. By statistical convention, the unemployed - those in search of work - are included in measures of the formal labor force. The Gurak study gives two revealing alternative measures of unemployment. Of the 31% of women in the sample who had worked at some time previously, 6% gave high priority to finding another job, and would thus be reckoned "unemployed" on even the narrowest definition of the term. By contrast, a much higher

figure, 43%, "had sought work" at some point during the previous year. (Many of the rest of the sample, all women of child bearing age, were presumably fully employed at home with family responsibilities.) These estimates give a range of notional "participation" rates of 39% to 74% for the sample, compared to the average rate of 45% in urban areas nationally in 1980 (see Table 1).

This study supports that idea raised in chapter 1 that official statistics severely underestimate the size of the available female labor force. The survey data suggests that many Dominican women are interested in paid employment but not actively seeking it, probably discouraged by the high rate of unemployment which makes job seeking unrewarding.

Some other data confirms the scale of underreporting of female labor force availability. The managing authority of one of the new Industrial Free Zones (Bani) opened a labor register in mid 1986, in anticipation of the opening of the Zone later in the year. By loudspeaker truck, the Zone corporation solicited names of people in the town of Bani who wished to be considered for employment in Zone enterprises. The response was so strong (more than 3,000 came forward in the first few days) that the recruitment drive was halted ahead of schedule. The great majority of applicants were women. According to a random sample of 50 of the application sheets (footnote), the average age of these potential workers was 26 years and 58% had no previous formal work experience of any kind.

[Footnote: we thank Sr. Luis Manuel Tejida, jr, for letting us see these application forms.].....

The Santo Domingo study found that the female population of working age was roughly equalled divided between three groups: those currently employed; those who had worked at some time previously; and those who were currently and had always been economically inactive. The Gurak study suggests that a far higher proportion of the currently inactive group should be counted as unemployed rather than economically inactive; the Bani data suggests that a

significant (though indeterminate) number of the always inactive should also be counted as part of the available female labor force. On both counts estimates of not only female unemployment but also female economic activity rates should be revised upwards.

### 2.3 The composition of the national female labor force

Larger numbers of women working for pay, combined with the considerable fall in the participation rate among men, means that women are a rapidly rising share of the employed Dominican workforce. In 1980, women accounted for 27.2% of the total labor force, compared to 10.5% in 1960 (Baez 1985).

There is some disaggregated information on the composition of this expanding female labor force. First, in view of the usual bias towards underestimation of women's economic participation in agriculture in developing countries, it is notable that the recorded rate of female labor force participation is higher (and has increased much more rapidly, from an extremely low base admittedly) in rural than in urban areas in the Dominican Republic. In 1980- the total rural female labor force participation rate was 43.3%, compared to 33.5% in the urban population (Baez 1985).

The rising total rate of female labor force participation cannot therefore be attributed to rapid urbanization, or to the rise of "modern" activities (e.g. large scale manufacturing industry) exclusively. It also suggests that employers establishing operations in the rural areas, away from the large cities - such as tenants of some of the newest IFZs - will not be dealing with a local female population unfamiliar with the routines and requirements of formal employment.

Second, the new women workers have not been drawn evenly from different age groups of the female population. Women aged 20-49 are now heavily represented in the labor force relative to other age groups. In both rural and urban areas, participation rates have increased most strongly among women of this age. For those between 20 and 39 years, almost half the population is now in the labor force (Baez, 1985). The female workforce in the Industrial Free Zones is drawn mostly from this age group, as we shall see.

The youngest and the oldest members of the adult female population have not increased their participation to anything like the same degree. Some of these age groups in fact decreased their participation rate between 1970 and 1980, especially in urban areas. Young women are undertaking more education than before, a factor which, on international experience, reduces the female participation rate in the short term (primarily up to the age of 25 years), but raises it subsequently (particularly in the next oldest age groups). The reasons for the decline in participation rates among older women are not clear. Participation rates are projected to continue rising among young and middle aged women, exceeding 50% for women aged 25-39 years by 1990, and reaching 56 percent among women aged 25 to 29 years (Ramirez, 1982). As noted above, however, these extrapolative forecasts are likely to have been overtaken by economic events in the interim that tend to push all female participation rates upwards.

The pattern of age-specific rises in female participation that has emerged in the Dominican Republic is significantly different from that in the industrialized countries. The main feature in that case has been the gradual elimination of a strongly bi-polar pattern of female economic activity (ILO/INSTRAW 1985). Women in the industrialised countries used to have relatively high rates of participation in their youngest and in their last child-bearing years. In between there was a trough, consistent with their withdrawal from the labor market to rear children. Nowadays, a more continuous pattern of labor market participation is becoming the norm for women. In the Dominican Republic the bi-polar pattern was never established in the first place; participation rates were uniformly low by age. Increased participation has in this case been a generalised phenomenon across all women of child-bearing age.

The distinctive Dominican age-related female participation rate pattern is probably related to the marital status of the female population. In the Dominican Republic the majority of marital unions are informal "consensual" unions rather than legal marriages. Most women aged between 15 and 40 are in

a marital union; but in total, and for every age group, consensual unions substantially outnumber legal marriages (see Table 6). The reverse is true for older women. This may imply that the formation of consensual unions is on the increase, historically speaking, and/or (as is likely) that consensual unions are less stable than marriages and women in a consensual union more likely to find themselves abandoned by their partner in later life than legally married women.

Married women's economic responsibilities within the household differ according to the legal status of the union. Within legal marriage, women have housekeeping and childcare responsibilities, but there is not a strong requirement for women to contribute to family income. In consensual unions, on the other hand, while women also have domestic responsibilities, they commonly also contribute financially to the family as well (Safa n.d.). This may be due to these women's perception that, in the light of the instability of consensual unions, they need to keep up their individual income earning capacity; or it may be due simply to the demands of their partner, who is less subject than a married man to the social obligation to maintain his wife and family.

Whatever the motivation, women in consensual unions seem well aware of their heavy burden of work and responsibilities, compared to married women, envying them their economic security and higher social status. A survey of women's attitudes to sharing of decision making and domestic tasks between partners showed that women in consensual unions had more "traditional" views of such matters than married women. They favored a relationship in which the woman had full domestic responsibilities, but less than equal rights in family decision making - and they believed that women should not have equal access with men to education and employment (Safa, n.d.). This suggests that they were prepared to forsake the struggle for economic independence on top of the burden of domestic work in exchange for the economic shelter of marriage, at least in its ideal-type. (By contrast, married women, who were more educated, were dissatisfied with the ideal-type of marriage, favoring more autonomy for the woman within the relationship, and more involvement of women in paid employment, on equitable terms with men.)

The implication of this information on the allocation of financial responsibilities between marital couples is that women in consensual unions are more strongly represented in the labor force than legally married women. Women in the former category would be less likely to withdraw from the labor force, either temporarily or permanently, on the establishment of a marital union or when they have small children. Unfortunately there is no published data on female labor force participation rates by marital status nor any breakdown of the female labor force in these terms. (Footnote: the 1980 census contains the raw information but does not cross-tabulate the processed data in this way.) If it were confirmed that the female labor force is constituted disproportionately of women from consensual unions, this would account in some measure for the absence of the bi-polar age pattern of female labor force participation found in the industrialised countries.

Women in consensual unions do not normally reckon themselves as "head of household", but a significant number of women in the Dominican Republic are living in households without an adult male (father or husband) (25 percent of all women and 33.9 percent of women aged 15-49 in urban areas in 1980, according to the Census). It is notable that between 1980 and 1983 in Santo Domingo, the rate of unemployment rose among all heads of households (male and female alike) but that the incidence of unemployment was always higher among female than among male heads of household (ONAPLAN, 1983).

#### 2.4 The sectoral and occupational distribution of women in paid employment.

Most women in the Dominican Republic now work outside the primary sector. The agricultural sector has been declining in national economic importance, with the faster relative growth of manufacturing, construction and corporate and public sector services. As noted above, however, increasing numbers of women in rural areas (particularly but not only older women) have been working for payment in agriculture, so the fall-off in agricultural employment has not affected women as strongly as men. Since 1960, both the share of the female labor force in agriculture and the formal importance of women workers in this sector have increased: even so, women constitute only a small part of the formal labor force (12% in 1980) (Baez 1985). The reasons are unclear. The increase may merely reflect better employment data collection methods, in

which case there may have been no change in the real situation. Or it may be reflect the mobilization of women into agriculture as male workers have migrated out of the countryside; or changes in agrarian relations - a general increase in wage labor with pressure of population on the land; or the spread of agribusiness (where women receive a large share of new jobs) and the accompanying formalization of employment contracts.

The service sector is the single largest source of employment for women in the Dominican Republic as in other Latin American and Caribbean countries. In 1980 45.7% of all employed women worked in this sector (see Table 7). Within the services sector, women work in public administration (11% in 1980), and health and related services (16%) but the majority (65%) are in domestic services, working as maids, cooks, babysitters etc. (see Table 8). This kind of work provides the largest single source of employment for women in the Dominican Republic, absorbing fully one quarter of the total female work force. Domestic services are a virtual female monopoly (93.6% of workers in this sub-sector are women (Baez 1985)), and the large size of domestic services employment in the tertiary sector as a whole carry over into the over-representation of women in the services sector as a whole, compared to their importance in the total national workforce. Women's predominance in this sector has been a constant feature of employment in the Dominican Republic, for the past twenty years, and seems likely to remain so.

It is within the last major sector of economic activity, industry, that some changes in the sexual division of labor have been taking place and new employment openings have arisen. By 1980 more than a quarter, 28.1%, of the workforce in manufacturing were women, compared to 17.5% in 1960 (see Table 7). Manufacturing industry seems to be the main non-agricultural sector where expansion has been flexible in terms of the sex composition of the workforce. In this the Dominican Republic is again typical of developing countries in the early stages of industrialization, at least those that are developing an internationally competitive manufacturing capability (Joeke 1987). And it is directly in this internationally competitive segment of industry - represented in the DR still more or less exclusively by IFZs - that female employment has risen fastest. By contrast, women have been almost totally excluded (except

from clerical positions) from the construction, transport and utilities industries, which have expanded rapidly over the same period.

There has been little alteration, however, over this period in the occupational distributions of the male and female workforces. The female labor force contains much higher proportions than the male labor force of office employees, domestic service workers and others in "unclassified" occupations, and also more in professional and technical positions (see Table 9). In the technical operative positions however men are much more likely to be employed, particularly in the directly productive secondary sector in areas outside manufacturing, such as energy, transport and construction. There has been some apparent increase over time in the number of workers (male and female) in sales occupations, artisanal and operatives positions and (very markedly) domestic and other personal services positions between 1970-80 (Table 9). The comparisons are undermined by definitional changes between 1970 and 1980, but nevertheless suggest a general downward movement in the occupational hierarchy and in particular an increase in services work of a kind for which training is not required, consistent with a relative expansion of the low productivity informal sector.

In terms of employment status also the female workforce is also poorly positioned. Far higher proportions of employed women than men are salaried workers, rather than employers or own-account workers, and far more are occasional or casual workers (see Table 4).

It is not possible to make sensible comparisons over time in this instance because terminological changes between decennial labor surveys invalidate comparisons (see Baez 1985).

## 2.5 Women's earnings

In keeping with their lesser occupational and employment status, women's income from wage employment is less than men's. Table 5 shows the distribution of wages from employment by sex for Santo Domingo in 1980 and 1983. In chapter 1 it was noted that the distribution of income had worsened over this period for the employed female labor force relative to the male. Here it is notable that in both periods far higher proportions of the female

labor force than the male are placed in the lower percentiles of the income distribution. For example, in 1980 40.8% of the total female labor force earned RD \$125 or less compared to 24.6% of the male labor force, and only 16.7% of the female labor force compared to 31.4% of the male labor force earned RD \$200 or more.

The unemployed, presumably with minimal or zero earnings, are included in the total denominator in these figures. Unemployment is more severe among women than men. The distribution of earnings within the employed labor force alone would come closer to an assessment of comparative earnings from wage employment. Entirely counter-intuitively, the earnings differential by sex widens on this comparison. In this case the share of the employed labor force earning RD\$125 or less is 55.2% among women, compared to 29.9% among men, a gap of 25.3% compared to 16.2%. This is a graphic illustration of the concentration of women into low earning, casual jobs.

A important consequence of women's lower earning power is that it leads to lower real incomes and greater poverty for one group of children: those who live in women headed households. In addition, as noted above (chapter 2.4), the incidence of unemployment is higher among female than male heads of households. In 1980 in urban areas of the Dominican Republic women heads of households in employment earned only slightly more than half as much as male heads from their principal occupation. Women headed households had fewer members (4.5 compared to 5.5), but this is not enough to negate the difference in capita incomes remains for members of differently headed households (Baez 1985).

Women's earnings are lower than men's in all countries of course, for three distinctive reasons. The occupational distribution differs by sex, and women are more heavily represented than men in the low-wage occupations such as domestic services. As noted, this is certainly the case in the Dominican Republic.

Second, women often work fewer hours than men. Even if wages were proportional to hours worked (which they are often not, part-time workers earning less pro rata than full-time), women's total earnings would be less.

There is no information about hours worked in the Dominican Republic, though some of the derisorily low earnings reported for women at the bottom end of the income distribution (21 percent earned less than RD\$50 a month, see Table 5) suggest that some of the work was casual and less than full time.

Third, there may be an outright differential in wages paid by sex, so that women earn less even carrying out exactly the same job as a man. The social rationalisation of this kind of discrimination often rests on the special "breadwinning" responsibilities of men, especially married men, and as counterpart the special family responsibilities of married women, which supposedly reduces women's commitment to paid employment, both over their lifetime and as regards any particular job. (As we shall see however, in chapter 4, Dominican IFZ employers do not agree with these characterisations.)

One of the clearest econometric studies of this issue, based on national data (Gannicott, 1986), shows that

marriage carries a premium in the labor market: positive for men, but negative for women. That is, statistically, there is nothing to explain men's relatively higher wages in any given job or occupation than the fact of their being married, and nothing similarly to explain married women's lower wages than their marital status.

There has been no aggregate test of this hypothesis for the Dominican Republic to see how systematic discrimination is in this case. But there is plenty of circumstantial evidence that the wage differential is pervasive. On several different breakdowns of data at a fairly disaggregated level, women's earnings are uniformly lower than men's. Taking, first, wages by economic activity (10 categories), the crude earnings ratio is greater than one for men compared to women in all activities except office work (see table 10). The ratio is largest at opposite ends of the income scale, among professional and technical workers at the top end and personal service workers at the bottom. Among production operatives, the group with which this report is most concerned, the ratio of male to female earnings was 1.8 in urban areas. The categorization is too broad of course to take this (or any other ratio in Table 10) as proxy

for the wage differential per se. The distribution of male and female workers by grade and type of job within the category probably differs, and this will account, in statistical terms, for part of the earnings differential. But anecdotal evidence from the IFZs (see chapter 4) confirms that in the labor market there are indeed different ruling male and female wage rates for any given position.

The breakdown of earnings by employment status (see Table 11) also shows an across the board bias in favor of males; interestingly, the differential is least among the (very small) group of employers and owners of businesses - presumably the women among this group, that awards itself income out of corporate earnings, are inclined to give themselves parity with their male peers (and are successful in generating the corporate earnings, also). Among wage employees the ratio of male to female earnings in urban areas is 1.6 for fixed wage workers and 1.5 for piece rate workers.

The earnings differences by sex according to educational attainment of the labor force (see Table 12) shows no consistent pattern. In the urban areas, the gap is widest among the uneducated, perhaps reflecting the very low paid informal sector work that poor, uneducated women are forced into, for want of any alternative. It is least among those with 10-12 years education, where the ratio of male to female earnings is 1.3. This group presumably includes women who go into office and clerical jobs, where as noted above, the earnings differential is favorable to women. Some modern industrial firms, e.g. electronics producers, are beginning to recruit their female workers from this category. Information from IFZ employers on this point (see Chapter 4) does not suggest however that expansion of work opportunities of this kind will help to reduce the earnings differential, since the wages paid are low.

## 2.6 Women's employment problem: unemployment and low wages.

Not only do women suffer higher rates of open unemployment than men, but there are grounds to believe that the true rate of unemployment for women is much higher than officially reported (and that the male labor force is not subject to the same degree of underestimation). There is, in other words, a massive shortage of jobs for women in the Dominican Republic. Employment creation

specifically for women is thus a legitimate policy objective. IFZs in the Dominican Republic, as in other developing countries, mainly employ women workers. In chapter 4 we consider to what extent they have in the past and may in the future increase the demand for female labor.

Partly because of the huge pool of available female labor and the historic concentration of women's jobs into certain sectors, women's earnings are lower than men's. We shall consider also to what extent expansion of the IFZs may alleviate the segregation of occupations by sex in the Dominican Republic, and provide employment at better wages and conditions than the type of jobs to which women are presently confined.

## Chapter 3

### The History and Importance of IFZs in the DR

#### 3.1 Background

It was on the European periphery, in Ireland, in the late 1950s that the first special industrial processing zone was established. An area of land was designated as a site for light industry, for the manufacture, mostly by foreign owned enterprises, of goods for export under much freer legal and fiscal regulations than applied in the rest of the national territory. Specific tax holidays applied on corporate profits, for example, and imported materials and components were free of customs duties and quotas. The setting up of special zones was a cost effective way of providing infrastructure for industrial establishments, and the geographical concentration made it easy to apply the preferential administrative and customs procedures.

Within a few years the idea of the free zone was taken up elsewhere, adopted by Asian countries in particular as an instrument of development policy. Free zones were set up in a number of countries, notably Hong Kong, South Korea, Singapore and Taiwan. Over the 1960s and 1970s many more zones were established in this and other regions. At the present time, there are variously estimated to be 96 zones in operation in 34 countries in 1981 (Sklair, 1986), or 117 zones in 34 countries in 1982/3 (Free Zone Authority Services, Inc., 1984). IFZ are scattered throughout the developing world, with particular concentrations of activity in East and South East Asia and in Central America and the Caribbean.

Free zones were conceived from the beginning as a kind of coastal gateway to international markets, and this character persists. They are often set up near ports and customs facilities so that materials and components could be imported and then processed and shipped out again as rapidly as possible. In these circumstances, free zones enterprises are involved in assembly work, combining imported parts into a final product, without any processing or fabrication of the materials. The prototype industries are apparel and electronics products (both semiconductors and consumer goods). Both these

industries - more exactly in the latter case, the production stages carried out in developing country free zones - are extremely labor intensive. Some machinery is used in both cases, but of a relatively unsophisticated kind. It represents a minor and fixed cost in comparison to the recurrent cost of labor in these and similar assembly operations. The spread of free zones throughout the developing world - and their absence in industrialised countries (with the arguable exception of Ireland) - reinforces the heavy weight of labor in the total costs of this kind of operation.

From the point of view of the foreign industrial country-based corporations, IFZs provide a sheltered, low wage setting for the production of labor-intensive goods for the home market, using labor obtainable at far lower wages (and unit costs) than at home. The only extra cost, compared to carrying on operations at home, is transportation of the parts and the final product; this cost may often be outweighed in any case by the exoneration from corporation tax on operations in a zone). Operations of this type are known as "offshore production", the extra-territoriality in this instance referring back to the industrial country, rather than to the host nation.

The small East Asian economies which set up the first zones were the first developing countries to formulate an "outward oriented" development strategy. The strategy comprised a set of measures to promote production of manufactured goods for export, hingeing on the liberalization of imports. It was a specific means of overcoming some of the limitations of the "import substituting" industrialization policies that had prevailed in most developing countries up to that time. "Import substitution" policies gave tariff protection to encourage production for the domestic markets and establish a local industrial capacity. But by the same token they tended to encourage costly and inefficient operations, unable to compete internationally and representing a partial wastage of local capital resources and foreign exchange.

Free zones, where imports were totally free of regulation and of duties, represented liberalization taken to its extreme. Moreover, in the nature of the case, they supported only enterprises that were internationally competitive and generated foreign exchange. Also, by attracting foreign

companies, they could draw on external sources of capital. In the Asian context then, the IFZs were a "spearhead" measure, to use Edgren's term (Edgren 198 ): an administrative device, but used essentially only as an integral part of a wider industrialization policy to upgrade and improve national industrial capacity.

It was not the primary objective of policy in the original Asian cases to attract foreign investment capital. These countries had relatively high savings rates, and were not short of financial capital per se. Their interest in foreign enterprise lay in the technological expertise and in the access to foreign markets they promised. In general, close relations was encouraged between local business and foreign enterprises, mainly through production sub-contracting, in order for these benefits to be widely realised.

In other countries however the IFZ concept evolved in a different direction. Policy makers in many countries recognised the advantages of increasing export earnings, but were not so keen to liberalise their economies and release the protective controls on production for the domestic market. For them, IFZs represented a way of encouraging export production without modifying the national trade regime and facing the politically difficult task of removing protection from local businesses. As "export platforms", isolated from the difficulties of operating in an inadequately serviced developing country environment, the zones also seemed likely to be attractive to foreign capital and thus a way of adding to scarce resources for investment. IFZs in these cases suggested to policy makers a way of improving the trade balance without diverting scarce local funds from other investment opportunities.

In such circumstances, the enclave character of the zones, expressing the dualism of economic policy, remained very strong. Where the motivation of attracting foreign capital was dominant, local entrepreneurs were usually not eligible to set up in the zones and relations between firms in the IFZ and national industries were not encouraged, so that IFZ firms had little connection with the local economy. Furthermore, daily operating conditions for enterprises differed strongly according to their location. Zone enterprises were often distinctly privileged to be free of the normally heavily bureaucratic licensing, customs and tax procedures facing local firms.

The zones also tended to be differentiated from their national setting by the high standard of infrastructure and services provided, compared to the rest of the country.

The promotion of IFZs was not well thought through as a policy in such "dualistic" cases. In the first place there were often inconsistent expectations of foreign investment on the part of the local government. With respect to the transfer of technology, for example, IFZs designed to be as enclave-like as possible and generally separate from the local economy, on the one hand, could not provide the conditions for the spread of modern technologies on the other. Second, the assembly nature of IFZ production, based on imported inputs, meant that the net foreign exchange earnings from exports of IFZ manufactures were often much less than forecast, except where local subcontracting of supplies was encouraged. Third, the competition among developing countries to attract foreign investors, outdoing each other in reducing tax charges and providing superior infrastructure and services, further undermined the national income benefits. Competition between sites also disposed foreign enterprises to reconsider their position from time to time, with the option of relocating in response to changed incentives. The international mobility to which this could give rise deprived national governments of any eventual corporate tax benefits after expiration of tax holidays and destabilized employment and trade patterns.

### 3.2 IFZs in the Dominican Republic.

The Dominican Republic's first free zone was established in 1969. At that time, and throughout the 1970s and early 1980s, the Dominican Republic was typical of the large number of developing countries that fell into the "dualistic" category above. However, the trade regime and certain elements of industrial policy have been changed since 1983/4 and have reduced the disparities in operating conditions inside and outside the Zones, bringing the situation in the DR closer to the Asian model.

At their inception, IFZs in the Dominican Republic were islands of liberality in a sea of industrial and fiscal regulations. National trade and foreign exchange regulations was strongly protectionist: a system of cumulative

tariffs applied, to which final products were subjected in full but from which many raw materials and intermediate products were exempted; there was a complex import licensing system; and enterprises engaging in any kind of international transaction were required to use the controlled foreign exchange market where the Dominican peso was grossly overvalued (World Bank 1985). The total effect of these regulations was a heavy bias in favor of local industrial production substituting for imports, and against production of exports: the industrial sector exported a mere 3 percent of output in the late 1970s (World Bank, 1985; p.46).

Against this background, the establishment of free zones, where enterprises were exempt from many of these restrictions, especially the tariffs on imports, could be seen as an attempt to retrieve at least some limited industrial export capacity and reduce the otherwise total dependence on the primary commodity sector for foreign exchange. (footnote: the technicalities of the legislation and administrative procedures governing IFZs in the DR are not described here. Refer to US Department of Commerce, 1986 and Free Zone Authority Services, Inc., 1986). In this respect the IFZs have been highly successful, quickly establishing themselves as a significant presence and in recent years demonstrating another burst of growth.

One curiosity in the history of IFZs in the DR is that the first zone, at La Romana, was set up not on government initiative but as the creation of a U.S. multinational corporation. Gulf and Western was a major force in the Dominican economy: it owned half the country's sugar cane acreage (sugar being the predominant cash crop, long the staple national export), and, with major interests in the industrial sector as well, approximately 10% of total national fixed capital investment. The company's management was sensitive to the local charge that its economic and political power was too big and its existence damaging to the economy of the country and the region where it was active. The political climate was also generally unstable and hostile to American influence following the U.S. invasion of the country in 1965. Largely as a promotional gesture therefore, Gulf and Western decided to open an industrial zone in in the city of La Romana in the east of the country, where the company owned a large tourist complex. It was hoped that

industrial companies would provide new sources of employment for the local population and undermine the image of Gulf and Western as the monopsony buyer of local labor and of La Romana as a company town.

Gulf and Western invested a total of US\$9m in the La Romana zone over the years (Free Zone Authority, Ltd., 1986). At the start, as evidence of faith in the viability of the zone, the corporation set up there the offshore operations of a number of companies within the Gulf and Western conglomerate. The zone grew steadily during the early years and reached its present size, in terms of number of companies, in 1974. However many of the companies have expanded their operations over time so production and employment in the zone have not been static. The La Romana zone operates on a non-profit basis, providing a relatively high standard of services for corporate tenants. Since the withdrawal of Gulf and Western from the Dominican Republic in 1984, the zone corporation has been taken over along with the rest of Gulf and Western's operations by a U.S./Dominican joint venture; but the terms and style of management remain essentially unchanged.

Two other zones were set up in conscious imitation of La Romana, once it was seen to succeed. Each of them now is now larger than the La Romana zone. The Santiago de los Caballeros zone was set up in 1974, in the country's second city and traditional center of industrial activity. It was established on the initiative of a group of local capitalists, in collaboration and with support from the Ministry of Industry. It is incorporated as a non-profit venture, and run by a consortium of local businessmen with government representatives on the board. Like the La Romana zone it quickly achieved a high rate of occupancy and there is a waiting list for enterprises wishing to enter. The San Pedro de Macoris zone, situated half way between the city of La Romana and the capital, Santo Domingo, was incorporated in 1973 by the government itself. It is operated by a special agency of government, FOMENTO, a section of the Ministry of Industry. In recent years the San Pedro zone has seen the fastest rate of expansion, but this is partly because it was always the least preferred of the three major sites by foreign investors and has been the only one with space to accommodate new enterprises.

Several years later, in 1983, a fourth zone was opened on the north coast, close to the port of Puerto Plata. It is modelled on the Santiago zone, and operated by a consortium of local businessmen in collaboration with the government. But the Puerto Plata zone has never filled its potential, and runs at more only about one quarter capacity. Demand for premises from enterprises was never strong - partly because the port facilities at Puerto Plata were inferior to those at Haina near Santo Domingo, which services the other zones; and the managing authority has had difficulty in securing finance to construction of new buildings.

Many other sites in various parts of the country have been designated as zones, in various parts of the country, including a second zone in a different area of La Romana city. By mid 1986 two sites were at an advanced stage of construction and would soon add to the four existing operations, but none of the others were beyond the drawing board stage. Both of the new zones are privately owned and this is likely to be the case also with any future ventures. One of the new zones is also intended to be profit-making, whereas all the existing zones (public and private alike) are incorporated as non-profit concerns.

The first tenant in fact began producing in the one of the new zones, Bani, in August 1986. The Bani IFZ was set up by a group of businessmen from the town of Bani nearby and incorporated on a non-profit basis. It was conceived of as a means of modernizing and expanding productive capacity in the town, providing employment for the local population and generating a surplus to benefit the region.

The other new zone is located at San Cristobal, adjacent to the port of Haina and is owned and operated by a local private corporation, in which the country's largest construction company (responsible, among other projects, for building the port of Haina itself) is a major shareholder. The San Cristobal zone is an ambitious venture, built to a grand scale and intended to house only companies of a Fortune 500 calibre. The San Cristobal zone is the only one where occupants of the zone were to have the option to buy as opposed to rent their premises. Its first tenant is Westinghouse, which commissioned and chose to buy extremely large premises, at least four times the average size of

shells existing in other zones. The company started training workers nearby in late 1985 (?) and planned to start productive operations before the end of 1986. By setting up on such a scale Westinghouse provided a capital infusion to the zone corporation large enough for it to finance all construction planned for the next phase. For the foreseeable future, therefore, the option to purchase is foreclosed for other enterprises wanting to start up in the zone, which seems likely to be profitable.

### 3.3 The scale of operations: production, exports and local revenues

Data on the number of enterprises, production and exports in IFZs in the Dominican Republic is set out in Tables 11 and 12. The increases in the number of firms in operation in first years of the 1970s reflected the consolidation of the La Romana zone, and the rapid start-ups of the other two main zones. By 1975 there were 34 enterprises in operation. The next phase of growth, bringing the the number of firms up to 76 in 1980, was due to the establishment of the Santiago and San Pedro de Macoris zones. Thereafter growth continued slowly, except that in 1982 the number of enterprises fell, reflecting the cutback in the volume of world trade in manufactures. In the most recent period, since 1983, there has been a surge in the number of firms in operation, to a current total of approximately 124 (Janka 1986). In terms of number of enterprises, San Pedro de Macoris is now the largest zone, with 51 firms, followed by Santiago with 43, La Romana with 22 and Puerto Plata with 8.

The growth paths of production and employment have mimicked the number of enterprises in exaggerated form. There is no measure of IFZ production levels per se, but given that all output is exported, they can be presumed synonymous with exports, which are set out in table 12 (inventories are probably small and can in any case be ignored over the long run).

In current prices, IFZ exports increased strongly up to the early 1980s, by 20 percent or more each year. The much weaker showing in 1982 and especially 1983, when the value of exports apparently fell absolutely for the first time in the history of the zones, is clearly related to the world market situation at that time. 1982 was the deepest year of the international recession, when

the volume of world trade in manufactures declined. Unfortunately final data is not available on actual exports from IFZs for that year, to see whether Dominican producers fared worse than the average.

World trade in manufactures, and with it market opportunities for IFZ exports, started to grow again after 1982, though the rate of expansion of world trade in manufactures of the 1960s and 1970s has not been reattained. Nevertheless DR exporters have gone from strength to strength; the DR's external market share in manufactures, particularly clothing, the main product of the zones, has increased dramatically. Imports of textiles and garments from the DR to the US (the sole final external market destination) increased from US \$176m in 1984 to \$221m in 1985 (US Dept of Commerce data). The DR has now attained a major position in the region and indeed worldwide as a supplier to the United States. By 1986 it was the 12th largest among 41 suppliers of manmade fabrics to the US and the 17th largest among 41 suppliers of cotton fabrics. Exports of cotton goods to the US increased by 35 percent during the previous year and were expected to increase by 50 percent in the current year; its importance as US supplier continues to rise (Financial Times, January 15, 1987).

These values for exports from the zones are gross export earnings of IFZ enterprises, as reported through customs. Out of this total, firms pay for current inputs (virtually all imported), labor, utilities, rent and other services, and retain a portion as corporate income. They remit to the local foreign exchange market only that portion of the total that they need to meet local expenditures, which they are required by law to pay for in pesos.

Table 12a sets out the dollar amounts surrendered for this purpose. The ratio of local expenses to total exports was fairly stable up to 1983 (the last year for which data are available) at approximately 1:3. Thus local revenues - one measure of the current direct national benefit from IFZs - amount to about one third of the crude value of IFZ exports.

### 3.4 The scale of operations: employment levels

Employment in the Zones built up rapidly at the start. The numbers employed increased by 50% or more each year up to 1976, when 5,000 were employed in the

three zones together (Table 13). From 1976-79 expansion proceeded at a slower pace, employment growing at around 30% a year on average. Thereafter the rate slipped again, down to an annual increase of less than 20%. 1982 and 1983 were rough years, as noted above; enterprises were badly hit by the international recession. Sales held up reasonably well in 1982, but collapsed in 1983; whereas the recession had a quicker impact on employment, workers being evidently laid off in response to declining orders rather than to actual sales. Thus employment fell in 1982 (by 7 percent) but began to recover the following year (with a rise of 16 percent). The change in local revenues from IFZ production was similar in real terms: they rose fractionally in nominal y 1 percent (Table 12a)), but this has to be discounted by the rate of inflation in that year, 7 percent (see page 9, above).

After the 1982/3 trough the zones experienced rapid expansion. In the following three years employment in the zones roughly doubled to 36,000 by mid-1986. By an authoritative estimate, based on employers expectations, the total was predicted to rise to 47,000 by the end of 1986 (Janka 1986). The rapid growth rates of the early 1970s have thus been duplicated and even surpassed, but from a much higher base.

The employment ranking of the individual zones differs from the ranking in terms of numbers of enterprises, because there are considerable variations in the average size of firms. Santiago has the largest workforce (12,731 persons in April 1986), San Pedro de Macoris has 11,752 workers, and La Romana 10,621. As these figures imply, La Romana has the largest enterprises (average size 483 employees) and San Pedro the smallest (230 employees), with Santiago firms also relatively small (296) (Janka 1986).

IFZ employment now represents a significant share of total industrial labor force in the Dominican Republic. Taking the urban areas alone, IFZs probably now employ about one person in ten of the total industrial workforce. (Footnote: calculated from Table 3 and Ramirez et al 1982).

### 3.5 Product composition of IFZ output

Apparel is by far the single most important category of goods produced in the Zones, with leather goods (mainly shoes), tobacco and electronics products trailing far behind. There is no data on the value of output from each sector, but the distribution of firms and of employment by sector are set out in Table 14. More than half the total number of enterprises (56 percent) are producing garments, 11 percent are producing shoes, 8 percent leather goods (coats, handbags, belts etc), 5 percent tobacco products (mostly cigars), and 4 percent each are producers of jewelry and electronics.

In terms of employment, the concentration on clothing is even more marked, with 64 percent of the workforce currently engaged in this sector. Clothing firms thus tend to be somewhat larger than the average in terms of number of employees. This is also the case with electronics, tobacco and jewelry firms: by contrast, leather goods producers of all kinds, including shoe manufacturers, tend to have relatively small operations.

The significantly larger size of enterprises in the La Romana zone is associated with the concentration there of clothing enterprises. More than three quarters of the enterprises (77 percent) and of employees (79 percent) are engaged in apparel manufacture (Table 14). Santiago is distinctive for hosting virtually all the tobacco firms; San Pedro for the diversity of enterprises based there.

There has been little change over time in the composition of output in the Zones. Clothing retains its primacy despite the Government's wish to encourage more higher-technology activities, and its promotional effort to attract investors from outside the clothing industry (Lic Arturo Peguero, San Pedro Industrialists Association and Sra Arelis Rodriguez, IPC, in interviews). It is notable that the electronics industry was more important in the past, in the early 1980s, than at present (Table 11a).

### 3.6 Local and international regulations governing IFZ producers

The steady expansion of IFZs in the DR in the 1970s and the growth surge of the mid 1980s are attributable to the local and international regulatory environment, which was generally favorable to investment from the beginning but became significantly more attractive around 1984.

As noted above, the local regulations governing Zone operations set by the Government were typical of developing countries in the region and elsewhere in offering investors freedom from most normal licensing requirements and exonerations from customs duties and taxes on wages and on corporate income. Producers were critical of some aspects of the administration of these regulations and of the supply of electricity, in particular (Janka, 1986 and World Bank 1985), but no doubt other potential sites in the region suffered their share of drawbacks too. The DR was ranked quite highly by US corporations because of its proximity to the US market, and because the financial incentives, quality of services and infrastructure and availability of labor compared well with those of other countries in the region (Claudio (Vedovato, 1986).

In terms of current production costs too the DR offered potential investors a good but not a persuasive deal. Privileged in their tax treatment and the cost to them of material inputs (all imported), Zone producers had no advantage over local producers in one major respect: the price they had to pay to obtain local currency for other production expenses, mainly wages, rent and the cost of utilities. IFZ producers were required to handle their foreign exchange transactions through the official market, in which the peso was priced at par with the US dollar, representing a substantial over-valuation of the peso. This had the effect of inflating the dollar costs of operations of Zone companies, compared with the disbursements they would have had to make if they had been able to obtain pesos in the parallel market. Even so, the DR was the fifth lowest cost site among seven Caribbean countries, according to a study prepared by the Central Bank in 1983 in response to complaints from IFZ operators about the damaging effects of the dual exchange rate system to the DR's competitive position (World Bank

1985). (Cost comparisons with other regions of the developing world were not made in this study.) The fact remained that reduction of the peso exchange rate would have improved the DR's competitive position still further.

The gradual unification of the exchange rate under the 1983/4 austerity program initially excluded IFZs exporters from the benefits; they were required, as before to use the official market. However, the IFZ industrialists lobbied the Government for access to the parallel market, which was soon granted (Pedro Gimenez, in interview). The consequence was an immediate lowering of the dollar costs of operation in the Zones, estimated by one manager at 30 percent in total (for more discussion, see chapter 4.2). According to the Central Bank study cited above, this would have brought down operating costs to the same level as Haiti, the cheapest site in the region. The new exchange rate policy thus transformed the competitive position of the Dominican Zones, and is the main reason for the rapid growth in activity in the Zones in the last three years.

Changes in the external regulations have played their part too in facilitating IFZ production, though not in the way often assumed. Certain provisions of the United States' tariff code have long favored offshore assembly production, and the Dominican IFZ producers took advantage of them from the beginning. The 806.30 and 807.00 provisions charge import duty on imported items only on that part of the value of the product attributable to value added abroad. The portion of the imported product price represented by US made components, which had been exported for further fabrication abroad, enters the US free of charge. This rule applies to all products; it has been most comprehensively utilised by the electronics industry, which was instrumental in the passage of the legislation in the first place and erected an internationalized production structure on this basis. The provisions are also widely used by the US clothing and textile industry. Clothing has achieved the highest rate of import penetration in the US market of any consumer product category, largely because of the efficient, low cost industries built up autonomously by a number of developing countries in East Asia. The US industry has tried to maintain its market share by locating the fabrication stages of production offshore in low-wage, developing countries. The viability of this strategy -

in which the DR has played a significant part - has depended on the 807.00 partial tariffs exonerations.

World trade in textiles and garments is subject to a special program of limitations called the Multi-Fibre Arrangement (MFA). The MFA has been in existence since 1974. It consists of a large number of bilateral trade agreements, renewed periodically, between importing, industrialized countries (mainly the US and the European Economic Community) and individual developing country suppliers. Its purpose has been to limit the growth of imports from these countries, and to this end has instituted detailed product quotas for each supplier within a global rate of increase that has varied over time. Among developing country exporters, four predominate: Hong Kong, South Korea, Taiwan and China. The MFA has imposed increasingly tight quotas on those suppliers, while leaving other smaller countries greater scope for increasing their exports. For this reason the Caribbean region has fared relatively well under the MFA. The DR has reached the ceiling in two product quotas and only five quotas are in force (as of summer 1986). In the other three cases, the rate of fulfillment averaged 53 percent for 1985/6 (US Dept of Commerce data).

In 1986 the MFA and the US Tariff Commission regulations were linked in a new measure, which was expected to further encourage textile and garments exports from the Dominican Republic but preserve US producers' interests at the same time. This rule, 807.00a or "super 807", lifted some MFA quotas so long as the products concerned utilized US made materials (i.e. qualified for entry under the 807.00 provision). Previously the MFA rules applied irrespective of the composition of the products concerned. An anti-surge clause was included, however, whereby the US retained the right to reimpose quotas, if exports grew excessively. The concession applied in principle to all countries in the Caribbean, although it was left to individual countries to initiate negotiations with the US authorities to arrive at particular product exonerations. The Dominican Republic was one of the first to pursue the matter and in July 1986 quotas on cotton shirts and women's and girls man-made fibre suits were removed for products using US fabric. With this new relaxation DR clothing producers face minimal current restrictions on selling to the US market, though the anti-surge clause entails future restrictions on access as a possible penalty for successful expansion.

The DR's relatively good treatment under the MFA has a twofold effect on promoting DR clothing production. First, it means that most individual DR-based producers can expand their operations indefinitely, limited only by their ability to compete on price and quality terms in the US market. Second, it increases the attractiveness of the DR IFZs as a location for potential investors, able to take advantage of the liberality of DR export provisions. A significant number of the clothing producers now operating in the Zones are Asian owned companies; as was one of the firms interviewed for this study. These producers are in any case under some pressure to seek out lower cost sites for export production, as wage levels in their home countries have been rising rapidly. The motivation for them to move offshore is compounded by the increasing MFA restrictions to which they have been subject in their home base.

Finally, a recently expanded provision under the US tax code may give a further incentive to US companies to invest in the Dominican Republic. Section 946 of the tax code has for some time provided for tax deferments to US companies on investments in Puerto Rico and other US island territories. In October 1986 the program was expanded to cover multiple investments in the Caribbean region that included a Puerto Rican component: the so-called "twin plant" approach. The large investment by Westinghouse that is underwriting the new zone at San Cristobal is twinned with a Puerto Rican operation in this way. If the Government of the DR should become a beneficiary of this program (which requires certain information exchange conditions to be met) then the Dominican section of such twinned investments will become eligible for tax deferment (Tucker 1986).

The 807a clause and the extension of tax code section 936, directed at the Caribbean and Central America, are the main actual or prospective benefits to Dominican industrial exporters under the much heralded 1984 Caribbean Basin Initiative (CBI). This is a 12 year, one-way free trade agreement giving designated countries in Central America and the Caribbean duty free access to the US market; there are supplementary investment incentives and extra was committed, above planned allocations. The investment incentives measures granted under the program have, apart from the 936 provision, mostly comprised

promotional efforts by the US authorities, and the supplementary aid has mostly gone to Central America (Tucker 1986). With regard to the investment drive, the Dominican Republic has been relatively favored under the CBI: the Department of Commerce singled out first Jamaica and then the DR for special investment promotion efforts. How influential these efforts have been it is impossible to judge; their most likely effect has been merely to hasten something that would have happened in any case, namely awareness among investors of the economic advantages of the DR, especially following the 1984 devaluation. The CBI does not seem to have led to any net growth in aggregate investment in the region.

The benefits of the trade preferences of the CBI are greatly limited, for the region in general and the DR in particular, by the large number of products not covered in the agreement, including, in the area of manufactures, many of the light industrial products such as textiles and garments, footwear, handbags, luggage and leather apparel in which the region has a comparative advantage. It is estimated that only 7 percent of imports from the region during 1984 and 1985 that were not given preferential access under other programs stood to gain from the CBI. Another restriction is that 35 percent or more of the import value of the product must have been added in the exporting country: this condition is difficult for operations using imported components to meet. Exports of items falling within the CBI have not increased since the introduction of the program, and in some instances there has been a marked loss of US market share (Tucker 1986). Given that textiles and garments are so important in Dominican non-traditional exports, it is especially notable that the CBI does not supersede the restrictive regulations of the MFA, though 807a represents a change in this respect.

## Chapter 4

### Employment in the IFZs

#### 4.1 Common features of employment in export processing zones

Numerous studies have been carried out of employment in export processing zones in developing countries, those on East and Southeast Asian zones and on the Mexican border industrialization being the best known (ILO/UNCTC, 1985 and Fernandez Kelly 1983). The economic impetus behind the creation of export processing operations is more or less universal and there are features common employment in export processing industries worldwide. Production is labor-intensive, so most of the jobs provided are of a highly specialized manual kind. By the same token, the tasks in these jobs are extremely narrowly defined and repetitious, and workers take a relatively short time to learn them. Workers quickly achieve standard levels of productivity, and gain no increase in income and little improvement in their job grade as they spend time on the job. A very small proportion of the total workforce is engaged in supervisory or managerial positions, and an even smaller proportion of local workers have access to these higher grade positions because they are often filled with expatriate employees.

The most striking finding of these international studies is that the majority of the workforce employed in export processing industries are women. This is a universal feature, regardless of the ideology about female wage employment and of the previous level of representation of women in the formal labor force in the country concerned. In Tunisia, for example, a Muslim country, women, previously poorly represented in wage employment, now comprise half the manufacturing labor force, entirely by virtue of the growth of offshore processing (Joekes 1987); Indonesia has had a similar experience. Moreover, it is found to be the case that these women are all young, with relatively good educational qualifications but no training or experience in wage employment, and that they do not stay in the work for long, but leave to marry and have children. In countries where the overall rate of female formal labor force participation rate is high, export processing has in effect intensified

a pattern of segmentation of work by age among women, with young women employed in export manufacturing and older women confined to the informal sector and to agriculture.

The most common explanation of the predominance of female workers in export processing relates to wages. Export processing employers incur a lower wage bill by employing mostly women than they would by employing men. Empirical evidence that wages in export processing are directly discriminatory by sex is hard to come by, in the DR as in other countries: the concentration of women in assembly work, so that few men are engaged in the same work, makes a controlled comparison difficult. But in cases where men are present in export processing firms male wages are found to be much higher (Joeke 1987).

Whether or not individual enterprises practice wage discrimination, prior segmentation of labor markets by sex in developing countries ensures that women's actual earnings are less than men's in all sectors. Partly because of the expectations bred by this difference, partly because the sex-typing of jobs and "occupational crowding" result in a larger excess supply of female labor relative to demand than is the case for males, and partly as a reflection of women's reproductive role and subordinate position within the household, the supply price of female labor is less than men's. Exporting manufacturers relocate offshore primarily in search of low cost labor; by extension they look to the cheapest local source, and end up with women. This is not to say that export industry wages are less than women obtain in alternative occupations - on the contrary, as part of the formal industrial sector, subject to minimum wage legislation, earnings in this sector often compare well with average female earnings, which of course accounts for the fact that women are prepared to take on this work.

There is no evidence that employers sacrifice productivity by employing women rather than men. To the contrary, research indicates that a workforce predominantly composed of women is preferred by employers for reasons of labor control, quality of production and reliability of attendance; and that women are easier to lay off when business turns down and less likely to protest or demand compensation for mass dismissal if the enterprise closes down entirely (Elson and Pearson 1983). The combination of such considerations

of labor control and of the lower wage bill makes the choice of women as the workforce a foregone conclusion for producers competing in international markets.

Employment in the IFZs in the DR fits this picture in that the majority of the workforce are indeed women. The following sections describe employment conditions and wages in the Zones in the light of the stereotype.

#### 4.2 Types of jobs provided in the DR

IFZ enterprises in the DR are typical assembly production operations, generating highly specific, repetitive, production line jobs classified as low skilled. It is intrinsic to the labor intensity of assembly operations of this type is that the bulk of employment is for "dead-end" repetitive jobs exemplifying specialization of labor taken to its extreme. It also means that the employment structure is very bottom heavy with a very high ratio of production line operatives to supervisory, skilled technical and managerial staff positions (ILO/UNCTC 1985). In the enterprises interviewed for this report, positions in direct production comprise on average 81 percent of the total number of jobs, the rest including not only the supervisory positions in into which promotion might be possible for shopfloor workers and management and administrative staff but technical and auxiliary (cleaning, janitorial) positions.

The length of training necessary for workers to hold down production line positions at the standard level of productivity varies by industry. The length of training is longest in the tobacco industry, which is in character closer to a traditional artisanal activity than to modern mass assembly production and rests on expertise on the part of all members of the workforce that takes a long time (1 or 2 years on the job) to acquire. In clothing, shoes and electronics, that together provide at least three quarters of IFZ jobs, the average training time is about 2 months. Most employers (an estimated 60% (Janka 1986)) put workers onto full wages, reflecting their attainment of standard productivity levels, before the end of the statutorily allowed three month apprenticeship period. Firms interviewed for this study reported extremely short training periods on the whole, with an average of

only two and a half weeks necessary for routine work. After that time workers might continue to improve their performance, but were considered part of the normal workforce not receiving any special attention or training assistance. Only two enterprises mentioned that it took 3 months or more for training to be completed, one of them saying that a whole year was needed for "full training".

As for working time, the basic requirement is a 44 hours working week, but most enterprises work involuntary overtime considerably beyond these hours. According to an earlier study, 67% of all women workers in IFZs worked an average of 10 or more hours a day (Ricort 1986) (presumably on a five day week), significantly above the statutory requirement. Another study of the same date (1981) reported that 48 percent of all women workers in the Zones routinely worked overtime; the proportion was considerably lower in Santiago than in the other two zones (Duarte and Corten n.d.). One firm interviewed for the present study reported an average load of 10 hours per week overtime, with 35 percent of the direct production workforce doing overtime on any day.

An interesting exception to this general rule of heavy overtime working concerns firms in the electronics industry, which reportedly relies heavily on overtime in locations in Asia (ILO/UNCTC 1985). In the DR, by contrast, the three electronics companies interviewed for this study are distinctive within the IFZs for normally holding to the statutory working week length and not requiring overtime. In one case overtime is never worked, as an absolute principle, in the other two it is done only in exceptional circumstances.

Finally, it is notable that although the labor legislation permits labor organizations in the IFZs, employers effectively prevent the unions from operating. It is said that once a year there is a short "open season" when union officials are allowed into the Zones, but any workers who join a union or show signs of activism thereafter are dismissed. In most zones worldwide unions are similarly prohibited, either formally or informally; but in some places in the region, e.g. Jamaica, labor organizations are present in IFZs. Acknowledgement of workers' right to association in free zones is included in the US Generalized System of Preferences (as renewed in 1984), which grants the DR and other developing countries duty-free access for many products. The CBI (1983) also includes existence of workers' right to organize in all sectors as a criterion of eligibility for duty-free treatment (though this is not an absolute requirement but subject to the discretionary judgment of the US President) (Overseas Development Council, 1986).

### 4.3 Workforce productivity

The majority of employers interviewed for this study had definite views of the level of productivity of their operations in comparison with the standards in equivalent plants in the US. Since the majority of firms interviewed (as of the IFZ population) are clothing firms owned by US companies which had set up offshore with the objective of reducing their unit labor costs of production, it is to be expected that managers should be well informed of the productivity levels - in wholly owned subsidiaries they are often required to monitor their output and report back to the parent company periodically for this reason.

Not surprisingly, virtually all the managers reported that their productivity was satisfactory, or was improving, so that operations were either actually *a* prospectively profitable given the wages they were paying. Almost half the interviewees were prepared to put a figure on their level of productivity. The worst performer reported productivity only 50 percent the US level (but this was a newly established enterprise); the three best, 85 percent, 90 percent and more than 100 percent respectively (the 100 percent figure was substantiated with detailed accounts comparing production with a similar US plant within the same company). The other reported values, including one Taiwanese owned enterprise, were all close to 70 percent.

Two other interviewees had further interesting data to offer. The first, who was active in the Zone industrialists association, said that for purposes of discussions with potential future investors in the IFZs he had come up with a formula for expected levels of productivity. He believed that incoming companies should be able to achieve 60 percent of US productivity by the end of the first 6 months, 70 percent in the second half of the first year, 80 percent in the second year and 80-85 percent after that. Our figures suggest this scheme is a plausible, or only slightly optimistic.

The second informant passed on comparative aggregate data his company had obtained on average productivity levels for offshore assembly production in the DR and other countries in the region: the DR managed 70 percent of US

levels, compared with 35 percent in Trinidad, 40 percent in Haiti and Honduras, 45 percent in Barbados, 60 percent in Mexico and El Salvador, and 80 percent in Costa Rica and Puerto Rico. The basis for these estimates was not clear, but they at least indicate the kinds of magnitudes on which managers base their offshore locational decisions. Given the comparatively low wages in dollar terms paid in the DR (see chapter 3.5), the DR's relatively good productivity performance reinforces its attractiveness as a site for offshore production, and suggests that IFZ expansion is unlikely to be constrained by cost factors.

A further dimension of productivity performance relates to the sex of employees. Employers' evident preference for women, in a situation of general excess supply of labor, testifies to their general perception of the superior productivity of predominantly female labor forces. They share this view with export processing manufacturers the world over, as we have seen. It is not inconsistent with a minority view, encountered in the DR and for example, Morocco (ILO/UNCTC 1985), that men "work better" (faster). This advantage is offset in practice in these kinds of production operations by greater care and better quality output, and the fewer disciplinary problems encountered as the proportion of women rises. One employer reported that his company had scaled down the share of male workers for this reason.

Some of the interviewees gave further information relating to differentials by sex in employment. One mentioned a study (unfortunately not properly identified) of male-female productivity differentials in this kind of operation in the US, which found a difference of 10-15 percent in women's favor. Another mentioned that he was reluctant to take on male employees because men took on IFZ jobs only as "a last resort" and were not committed to the work. There was a stigma against men working in the Zones, which had the image of being places where only women worked.

The factors that determine the aggregate level of productivity in export processing operations range from the production techniques chosen (which may be considered standard in the kinds of production light industrial assembly production found in the IFZs) and managerial competence, and on the labor side from the level of discipline and previous training and industrial experience

of the labor force, and rates of turnover and absenteeism among the workers. Absenteeism in particular is influenced by factors external to the workforce, such as the standard of health and transport services, and the level of social support available to parents of young children. Some of these factors may be open to improvement through project interventions, and the information on these matters given by interviewees begins to set the direction for the recommendations put forward later in this report.

Consistent with the high level of productivity enjoyed by IFZ producers, the general view among managers interviewed for this report is that rates of turnover and absenteeism are not high enough to cause managers great concern. Turnover was rarely mentioned by informants as a significant issue, except in one enterprise, a tobacco firm, which has to give lengthy training to new workers. This is not surprising: the labor market, as we have seen, is in chronic over-supply, and also our interviews make it clear that IFZ employers in the DR, as in export processing zones in other countries (ILO/UNCTC, 1985), operate an informal embargo on taking on workers from other enterprises in their respective zone. Therefore both market forces and local institutional arrangements serve to limit workers' ability to change jobs.

Absenteeism ranges between 2 and 5 percent in the firms interviewed, with the major proviso that Monday mornings are a time of high absentee rates (12-15 percent) in the Santiago zone. This is said to be due to the fact that Sunday night is the traditional night for partying in this area. Of the two managers who had any views on sex differentials in absenteeism, one said male absenteeism was worse than female, due to hangovers among men, the other the reverse, due to women's "menstrual" problems. But other information implied that female absenteeism is probably the higher, for the difficulties of childcare and children's illnesses were cited by a number of interviewees as a significant cause of absences.

Health problems of the workers themselves were the most frequently cited cause of absences. In fact there was a striking near consensus among the respondents that weaknesses in the social infrastructure dealing with health was the single most important cause of reduced productivity among the workforce, even though it did not result in abnormally high absenteeism rates. Obtaining

service through the normal channels of the state health service (the IDSS) was said to be very slow; two days was cited as the time it normally took for a patient to receive attention. Furthermore the IDSS is notorious for its lack of personnel and supplies. The slowness of the health service first, deters workers from applying to the system while they would otherwise seek medical attention (and meanwhile worked at less than full strength), and second, means that illnesses often developed into a more serious complaint than necessary. Moreover, workers' access to the IDSS, which is a statutory right for permanent employees, is not extended to their families. Therefore the inadequacies of the health system account also for the secondary absenteeism caused by children's sicknesses. The weakness of the IDSS is in fact considered unacceptable by most IFZ producers, who have at some cost taken steps (described in chapter 6) to reduce the incidence of health-related problems among their workforces, and this has helped to bring absenteeism down to its present relatively low level.

Apart from the matter of children's illnesses, several employers remarked on the difficulties that women had in arranging childcare as a cause of direct and indirect reductions in productivity. They were perhaps unusually aware of the problem because so many of them, as will be seen, employed women with children by preference. One noted that his company had lost many good women employees because they had been unable to arrange for care of new born children. Others were aware that the problem led women from rural areas to live as weekly (or longer) commuters, leaving their children with relatives in their home area and living in rented accommodation in the town in order to hold down the job; and that in many cases the arrangements that were made were inadequate for the children's welfare and unsatisfactory for the mother. The fact that children's illnesses often led mothers to miss work suggests that the routine arrangements for their care may be very sketchy and supervision of the children inadequate: regular caretakers would be able to cope with minor illnesses among their charges, and the incidence of serious child diseases is not high in the DR.

The childcare problem as related to worker productivity is a self-limiting one. After a certain point, inadequacies in childcare services drive the mother to give up (or be fired from) a job in a factory, either to withdraw

from the labor force or to seek an occupation with less rigid attendance requirements (or something carried out at home) which is compatible with caring for the child herself. There is sufficient evidence from the interview material to suggest that the issue warrants attention when improvements in worker services are at stake.

The relevance of the childcare question is likely to strengthen with continued expansion of the zones. For another major issue of workforce productivity relates to an emerging, rather than to a long-experienced concern on the part of employers. The rapid expansion of the Zones is leading established enterprises to fear the loss of experienced workers, bid away by other firms, and new employers face very heavy start-up costs in training new workers to acceptable levels of productivity. Continued increase in production levels in the Zones will certainly dilute the pool of industrially experienced workers in the DR. Although training periods for most jobs in the IFZs are very short, training does represent a cost to employers; some employers, notably in the electronics industry recruit young workers specifically without experience, these are the minority. Clothing firms in particular prefer workers with prior experience, if they can be found. Astute employers, such as one among those interviewed, are training up extra workers in anticipation of losing a larger number of their workforce than previously as new firms enter the field. But smaller enterprises without the resources or experience to train up the bulk of their workforce are put at a considerable handicap, having to compete with firms that can take on mass training programs. This emerging shortage of experienced labor will reduce the attractiveness of the DR to potential foreign investors, except the largest multinational corporations. And it is likely to have a damaging effect on the quality of the workforce available to local employers outside the Zones.

#### 4.4 Wages

When IFZs were first established in the Dominican Republic enterprises were granted special status under the labor legislation. They were exempted from the national minimum wage provision, and required to pay only 80% of the ruling minimum wage to their employees (Duarte and Corten n.d.p 10). The minimum wage was set at 30 centavos per hour in 1973, rising to 50 centavos in 1974. In 1979 the exemption was removed, and since that time IFZ enterprises have been subject to the minimum wage along with companies operating outside the Zones. In 1979 also the rate was increased to 65 centavos; it was raised

again in 1984 (check). The minimum wage currently (1986) stands at RD \$1.31 per hour, or approximately RD\$250 per month.

No official statistics are published on IFZ wages in the Dominican Republic, and no local agency is charged with collecting this information. It is not known therefore for certain whether Zone enterprises in fact conform with the minimum wage requirement. The evidence from empirical studies of wages in the IFZs is that Zone enterprises have paid close to the minimum wage level since the early 1980s (slightly below or above, according to source).

Wage information comes from two studies of women employed in IFZs, carried out separately in 1981 by CIPAF (Reyes 1986), and by Duarte (Duarte and Corten n.d.), and from a third study, a survey done in early 1986 (Janka 1986).

The two 1981 studies both used statistically imperfect methods of sampling the workforce population, because of difficulties of access to Zone enterprises. However their results were not obviously biased, and their findings are similar. According to the CIPAF survey the average wage was RD \$119.06, slightly below the minimum wage of RD \$125 at that time (Reyes 1986). Duarte and Corten, without citing a mean level, report that 21% of their sample received wages above the legal minimum, 9% received less, while the majority, 70%, received the minimum wage itself (Duarte and Corten, n.d.). The implication is that average wages were slightly above the minimum wage in this case.

The CIPAF survey of women workers in the IFZs was part of a larger study which included for comparison women workers in the domestic industry. The findings with respect to wages in the two sectors were remarkable, and go against the normal view in the literature. Subsidiaries of multinational corporations, including those in export processing zones, are normally found to pay slightly above average wages in developing countries (ILO/UNCTC 1985). In this case, earnings of women workers were significantly higher in the domestic than in the international sector: RD \$143 per month in the domestic sector, compared to RD \$119 in the IFZs (Reyes 1986). The comparison holds within each type of industry: in the clothing industry, for example, average wages were RD \$119 in the IFZs, compared to RD \$150 in the domestic industry. Sampling methods were

not identical between the two parts of the study, being more reliable in the domestic sector: but the IFZ sector presents a fairly homogeneous situation, so that it is the less vulnerable to sampling irregularities in any case.

What can explain this unusual result? First, most of Dominican national industries are situated in the capital, Santo Domingo, while the zones are in smaller towns where rents and other consumer costs may be lower. Average wages probably vary to some extent from region to region reflecting local costs. Two other factors may play a part. First, the survey was carried out in 1981, two years after 20 percent reduction on the minimum wage for IFZ enterprises was abolished; if enterprises delayed conforming with the new requirement, 1981 might have fallen within the period of transition from the lower to the upper (minimum) wage level. Unfortunately there is no data from neighboring years with which to test this idea. Second, there is a structural reason that might be relevant. As already noted above (chapter 3), industry in the DR was heavily dualistic as between the domestic and the international sector, and the domestic sector, built up behind protective barriers was much more capital intensive. Capital intensive industries are by definition ones where labor productivity is higher, and where returns to labor tend to be higher, influencing the determination of wages in the labor market as a whole. The high final product prices which the protected local market made possible also allow returns to labor to be higher than in internationally competitive operations. If this factor applied, reductions in the general level of Dominican tariffs since 1981 would have eroded the wage differential between the two sectors. In this case, wage data on the domestic sector is needed for comparison, but this is also lacking.

Data on current wage levels in the IFZs is available from a recent study prepared for the Ministry of Industry (FOMENTO) (Janka 1986). This is the most comprehensive of all three studies, based in this case on information from employers rather than workers. The data was collected in March-April 1986, and includes information from virtually all the enterprises operating in all the Zones, and for all workers, both male and female. The average wage level for all workers was estimated to be RD\$290, significantly above the prevailing minimum wage of RD\$250. Given the heavy overtime workload in most firms, it is to be expected that average actual wages would exceed the minimum

level; in fact, the surplus seems rather small in this light, suggesting that the wage level may be overlooked quite often. The normal wage payments system in firms outside the electronics industry is based entirely or in part on piecework (or "bonus") payments; it may be within the letter of the law, if not its spirit, for firms to set average performance/piecework wages at the minimum level. If this is the case, workers whose performance is below average may get wages below the minimum, or at least not get paid for time worked over 44 hours if this is required by the employer to make up the average production quota.

Janka's wage data is not disaggregated by sex, so it does not indicate, for example, how far (if at all) women's wages exceeded the minimum wage. Male workers' average earnings are probably higher than women's (see below, Chap 5.3). The data therefore cannot be used to compare 1986 wages with 1981 (female) wages in the IFZs.

Nor can any direct statement be made from these data about the level of female wages relative to the current minimum wage, to see if for example there is any discriminatory treatment of women workers (employers might observe the minimum wage in total, in paying women below and men above this level). However, detailed data about wages in one of the zones (footnote) (kindly supplied by the author) gives information on wages in different types of firm according to product. The two highest paying industries are tobacco and metal products, both with relatively high proportions of male workers (but also with unusually long training periods); clothing and electronics, both with high shares of women workers, are ranked lowest. All industries however in this case pay wages well above the minimum rate.

Has the expansion of the manufacturing sector in the DR supported increases in the standard of living of its workforce? Wages in Dominican manufacturing have risen rapidly in nominal terms in the 1970s and 1980s, and in the 1970s real wages also increased significantly. The real value of the legal minimum wage increased by 27% between 1973 and 1981 (from 17.86 centavos per hour in 1973 to 22.62 centavos per hour in 1980, in 1969 prices, with fluctuations in between) (Duarte and Corten, n.d.). But between 1981 and 1984 there was a 17% reduction in the actual average real wage in

manufacturing industries (matching the fall in total real wages in the Dominican economy for that period) (Mota and Flores, 1986).

Production workers in the private sector of manufacturing industry managed to improve their relative income position over the longer period 1976 to 1984. The average wage of the lowest paid category of workers in manufacturing industry increased 86% in current prices over that period, compared to an increase of 68% in the general national average (Mota and Flores, 1986). Whether IFZ workers, who are included in the lowest paid category, shared in this gain is not known.

In the early years of IFZ operations, the real value of wages bore little relation to the international cost of the wage bill paid by foreign enterprises in the IFZs. Under the foreign exchange regulations then in force foreign enterprises had to purchase Dominican pesos at parity with the US dollar. The dollar wage bill to them was at first US\$100 per worker, later rising to US\$125. Thus, wage costs to foreign enterprises in the Zones in the DR were almost the same in the Dominican Republic as in, for example, Puerto Rico, which adhered to US wage standards for industrial assembly operations (Safa, n.d.). The wage bill, along with other local production costs, was reduced in dollar terms following the exchange rate liberalization in early 1984. The reduction was in labor costs in dollar terms was less than the full extent of the devaluation, however, because another element in the set of 1984/85 adjustment measures was an increase in the peso denominated minimum wage to RD\$250. At the rate of exchange prevailing in August 1986 (US\$1 = RD\$3, approximately) the dollar average wage was approximately US\$90.

Although wages paid in IFZs do not show large variations according to the characteristics of the employee (apart from sex), the CIPAF and Janka studies give information on wages according to workers' age, education, industry and Zone location, and to industry and Zone location, respectively.

There is a slight, non-linear relation between age and wages for women workers in the Zones, according to CIPAF survey data. Wage levels are lowest for the youngest workers aged 16-19 years (RD\$ 109.11), somewhat higher for the next two age groups 20-24 and 25-29 years (RD\$ 121.49 and 122.49 respectively), and

then fall back again for women aged 30-39 and 40 and above (RD\$ 119.76 and 114.03 respectively) (Reyes, 1986). These figures suggest that wages are productivity-based rather than that any seniority element applies. Data are not available on wages in relation to length of service of IFZ workers for this interpretation to be tested directly.

The CIPAF survey data reveals that education procures some increase in wages over the level for completed uneducated workers, but that beyond this point, there is no positive association between years of schooling and wages, even for post secondary school attendance (Reyes 1986). Wages are highest for women who have had 7-9 years schooling. Post-secondary school attendance brings no significantly higher wage than to women who have not gone beyond elementary school. In other industrial settings, this level of education brings access to higher graded jobs within, and more importantly, outside, the direct production sections. But in the Dominican Republic there is no apparently no incremental return to women for ten years school attendance or more. This indicates the extreme labor surplus situation that obtains; but it is also related to variations in working practices between different industries in the Zones.

The dispersion of wages among industries in the Zones in the Dominican Republic is rather distinctive in international terms. In other countries export manufacturing industries, the normal pattern is for the clothing industry to pay relatively low wages and for electronics to pay higher wages. In the Dominican Republic IFZs this pattern is reversed; in particular, electronics is probably the lowest wage industry in the Zones. One electronics manager interviewed for this study asserted that wages in the clothing industry were higher than in electronics. Data was also made available to us concerning intra-industry wage levels in one of the Zones (Footnote: we gratefully acknowledge Gerold Janka's provision of this data). Electronics firms' average wage is RD \$270, compared with RD \$300 in clothing and shoes enterprises, and RD \$320 and RD \$330 in leather goods and tobacco respectively. The ranking of industries across all the Zones in 1981 was similar, according to the CIPAF survey data, with tobacco wages being the highest, clothing paying approximately average wages, though

shoes and leather goods in this case paid below average rates (Reyes 1986). Information is not available on wages in electronics enterprises from that sample.

Despite their low wages, electronics firms use a better educated labor force than other enterprises. The majority of electronics production workers have some high school education, and many are continuing their education, at high school or college level, in evening classes. In two of the firms interviewed for this study, one had 50 college students in its production workforce of 348, and in the other 90 percent of workers were said to be continuing their education at night school; both firms required all workers to have 8th grade education or above. The key to electronics firms' ability to attract such relatively well qualified workers at lower than average wages is that the production schedule is made to be compatible with workers' attendance at night school. In other countries (ILO /UNCTC 1985) the electronics industry relies heavily on overtime, and pays above average wages in order to attract the qualified workers it needs. But in the Dominican Republic employment opportunities for women are so few that the electronics industry need not institute a wage incentive and relies on the simple device of limiting working hours.

It is possible that electronics firms can attract the requisite workforce even paying a lower effective hourly wage rate (as well as lower gross wages) than other firms, though it is not possible to make this calculation with the available data. What is clear is that electronics workers' total earnings are significantly lower than others. Clearly the employment options are so limited that more educated women are prepared to forgo any current benefit from their achievement, and accept lower earnings from their work in the Zones for the sake of continuing with their studies. The fact that they are prepared nevertheless to sacrifice higher current earnings (in other types of Zone enterprises, for instance) suggests either that there is a social premium attached to higher educational qualifications, and/or that other higher paid jobs are available to them, once qualified, outside the Zones. Half of the single workers in the CIPAF sample aspired to work as secretaries, teachers or nurses (Ricourt, 1986). The high level of female unemployment suggests that many of them are likely to be disappointed.

#### 4.5 Characteristics of the workers

Approximately three quarters of the total IFZ workforce in the DR are women. In May and June 1986 74 percent of the La Romana zone workforce and 77 percent of the Puerto Plata workforce were women (data from the other zones was not available; CPI, personal communication). Among the firms interviewed for this study, the average proportion of women was 74 percent in clothing and textiles, 85 percent in electronics, 50 percent in shoes and 30 percent in tobacco firms. However there are some indications that this sex ratio is coming under some pressure, and that the proportion of men may be rising; we return to this point at the end of the section.

Male employees are concentrated in the higher grade positions (management, administration, technical and supervisory posts), except in shoes and tobacco where they are well represented in the direct production workforce (in tobacco forming the majority). Many of the senior management and technical staff many are expatriates. Locally hired technical staff in La Romana are said in many cases to come from Santiago, where there are good technical training colleges and a diversified local industry, whereas San Pedro de Macoris zone draws on graduates of the local technical university. Little is known however of the origins or socio-economic characteristics of the remainder of the male workforce.

On the other hand, there is considerable information on these matters for the female workforce in the IFZs, drawn from two surveys carried out in 1981 and referred to above: the first carried out by CIPAF and the second by Duarte and Corten. Between them they include a great deal of data on the age, marital status and numbers of children, household position and educational attainments of women workers in the Zones.

The female workforce in the Zones is predominantly young, with the average age in the mid 20s. This is not however a youthful workforce compared to IFZs in other developing countries. Worldwide it has been estimated that 85 percent of women export processing workers are under 25 years of age (ILO/UNCTC 1985). As elsewhere, this expresses a deliberate strategy on the part of employers. Three of those interviewed declared upper age limits of 35, 30 and 28 years

another reported a preference for workers under 26. Electronics firms may have slightly younger workforces: one firm's workers averaged 18 years, another 23-24 years; this would be consistent with the large number of workers in these enterprises continuing their education at night school, as noted above. On the other hand, the first of these two companies was fairly recently established while the other had been operating for twelve years, and to some extent the workforce would be expected to age along with the firm.

According to the surveys cited above, in 1981 48 percent of women workers were 24 years of age or below, and almost one third (32.5 percent) fell into the age range 20-24 years (see Table 15). The situation does not seem to have changed much over the intervening years of expansion of the zones. The median age of the workforce would have been rising if numbers of women remain in the jobs they held 5 years ago, though age ceilings, if enforced on existing members of the workforce, would militate against this. (Footnote: recent follow up interviews in the La Romana zone were surprisingly successful in locating women workers in their previous place of employment - this does suggest that employment opportunities may persist for individual women as expansion continues (Prof Helen Safa, personal communication), and the age spread of the IFZ workforce may widen accordingly.)

In any event, the IFZ workforce is markedly younger than the female workforce in Dominican domestic industries (see Table 15). Only 27 percent of these workers are 24 years or less, and 65 percent are over 30.

As well as employing slightly older women than the international norm for IFZs - a norm heavily weighted by Asian zones - Dominican IFZ employers include large numbers of married women with children in their workforces. The age ceiling, if applied, is not a pretext for dismissing women before they get pregnant and call on maternity leave and other benefits (often said to underly employers' objections to female employees). In the DR not only are the majority of women workers mothers, many of them are without a male partner to share the costs and responsibilities of childrearing. A few employers reported an active preference for women in this position, on the grounds that it ensured their commitment to the job. Three managers claimed that 75 percent or more of their workers fell into this category; others knew of its

prevalence of the phenomenon. By contrast, two firms acted to ensure that their workforce did not meet this description, one going so far as to screen applicants for pregnancy; evidently they did not share the others' belief about the effects of this personal status on work behavior.

Although the outcome is different, the motivations of employers in selecting young, unmarried girls in Asian zones and less young women with children in the DR (and other countries in the region also (Fernandez Kelly 1983 ), are similar: in either case, the women's social obligations are thought to induce reliability and stability in the workforce.

Not only is the incidence of motherhood high in the IFZ workforce, but women have large numbers of children (consistent with the high fertility levels found in the DR). According to the CIPAF survey, 63 percent of women workers had children and almost half of those three or more (Catanzaro 1986). Duarte and Corten put a higher estimate on the incidence of childbearing: in their sample 84 percent of women had children, 38 percent of them 4 or more. The average number of children was 1.3 among women aged 20-24, 2.5 for women aged 25-29, 4.8 for women aged 30-34 and 5.9 for women of 35 years and above (Duarte and Corten n.d.).

The marital status of women workers is described in Table 16. Women in consensual unions are the largest single group (34 percent), followed by divorced or separated women (25 percent) and single women (22 percent). The A very small proportion (4 percent) of single women have children; among women in marital unions, more children are found in consensual unions than in legal marriages. 87 percent of women in consensual unions have children, compared to 74 percent of married and 84 percent of divorced women (Catanzaro 1986). This finding is not generalizable to the national level, but suggests that the economic pressures to take wage employment may be higher among mothers in consensual unions than in legal marriages.

Duarte and Corten point to another indicator of the economic pressures women are under in seeking paid work. A significant proportion of these women (19 percent) are unable to live with their children (or with all of them).

The practice is much more common in La Romana and San Pedro than in Santiago. Either the general cost of supporting a whole family in the city is too great, or childcare arrangements in particular are too expensive, and children have to be left behind with relatives in the rural areas. One of the employers interviewed knew this was common among his workforce, and several others noted that children were left with relatives, without specifying their location.

The economic status of women in their households is another relevant issue. A substantial proportion of women workers are economic head of household, meaning that they are the main or sole provider of material support for their household: 31.5 percent in the Duarte and Corten survey, 38 percent in the CIPAF sample (Duarte and Corten n.d., Catanzaro 1986 and Reyes 1986). 21 percent of the former group in fact live with a marital partner, but bring in higher wages; in the sample as a whole, 17 percent are "de jure" head of household, living with children without a male partner or their father. About one third of women IFZ workers are the "breadwinners" for their families, a role normally reserved for men in the social consciousness.

The CIPAF definition of household headship was on purpose left to the subjective judgement of the women respondents. They gave greater weight to the legal or kinship definition than to the business of material support. Thus far fewer women declared themselves head (26 percent) than had the prime role in supporting the household, and the incidence of headship on this reckoning was nearly co-extensive with the categorization by marital status: most divorced or separated and widowed women (who amount to 27 percent of the sample) were considered household heads, and very few of those in a marital union (11 percent).

With regard to the value of women's wages to their households, the CIPAF data shows that, not surprisingly, there is considerable variation in relation to women's marital status. The great majority of widowed and divorced women are the main providers, and 40 percent of them have no other source of support for their families at all (Safa n.d.). Almost twice as many women in consensual unions as in legal marriages are the main providers (30 as opposed to 18 percent) (see Table 17).

Even where women are not the main provider, their wages make an important contribution to the family budget. Duarte and Corten estimate that one third of women workers' earnings are devoted in their entirety to meeting the total food expenses of their household; another third share food costs with other household members. The CIPAF data confirms these findings in general, noting a predictable variation among women according to their marital status: women without a marital partner have to commit all their wages to household subsistence, women in marital unions share household expenses with their partner, and single women are the least called on for regular subsistence contributions. Women in domestic industries also contribute in a major way to their households, with a slightly higher proportion being the main provider (Catanzaro 1986).

Workers in the formal industrial sector in developing countries usually have relatively good incomes by local standards. In the DR this is not strongly the case for export processing zone workers. Women workers in IFZs in the DR fell only in the sixth decile of the female income distribution in 1981, when 40.8 percent of the employed female labor force earned the minimum wage or above (see Table 5). The fact that such a large share of the workers are the main earners for their families of course indicates that the value of their earnings is high, but there is evidence to suggest that they do not come from the lowest income families. The fathers of 80 percent of women workers are agricultural or, in the eastern region, sugar workers, the rest mostly self employed workers or craftsmen. Sugar workers were relatively well paid and had a secure income, though the other occupations were not so favored (Duarte and Corten n.d.). Women IFZ workers were fortunate in another respect, in that in 1981 their male partners suffered less from unemployment than the national norm (11 percent compared to 16.5 percent nationally (Safa n.d.)). This element of the situation has certainly undergone a change in the intervening period, however, as noted below.

Data on the educational attainment of IFZ workers shows them to have had better access than normal to the education system, another indication that their socio-economic background is not of the poorest. 56.1 percent of the CIPAF sample had had some elementary school education, 38.5 percent had attended high school and 3.0 percent had been to college (not necessarily

graduated (Catanzaro 1986). 57 percent of the second sample had had more than 6 years of education (Duarte and Corten n.d.). At the national level, 28 percent of the adult female population was illiterate (Baez 1985) and only 16 percent of women aged 15-39 had had 6 years of schooling (Duarte and Corten n.d.).

Most employers in the Zones have clear educational criteria in selecting workers, even if they are not always able to meet them. Literacy is generally preferred, and some education is necessary for promotion to the supervisory posts. But in practice many employers reported that most of their workforce was illiterate. These were clothing and other enterprises outside the electronics sector. The three electronics firms interviewed portrayed a very different picture. Each of them reported that 8th grade education was an absolute requirement met by all their workers. The electronics industry is clearly able to be highly selective in its recruitment.

Finally, it should be noted that the share of men seeking jobs in the IFZs is presently increasing, and some employers believe that the share of men taken on may be rising also. In other locations, e.g. Singapore, the same phenomenon has been noted, and indicates the "maturation" of IFZ production (Sklair 1986). As the technical level of production in export processing rises, there is an increase in the proportion of technical positions for which men supply the overwhelming majority of qualified candidates. But there is no evolution in respect of either the sophistication of output composition in the Zones nor of techniques of production to suggest that the same factor applies in this case. It is much more likely it follows from sharp decreases in local work opportunities for men and falls in wages in some traditionally male occupations (sugar, tailoring). Men's likelihood of succeeding in getting work depends in part on men's willingness to moderate their wage demands and on employers' perceptions of the differences between male and female employees (as discussed in Chapter 5).

## Chapter 5

### The benefits and limitations of IFZ employment

#### 5.1. The national and local impact

This chapter briefly assesses the impact of employment creation in IFZs in the DR, recapitulating points made previously in this Report. It also sets the scene for the recommendations which follow in chapter 6.

At the national level, the expansion of the IFZs has had significant effect on the total level of employment - though not necessarily bringing down the total official rate of unemployment, in so far as it may have encouraged more people, women especially, to seek work openly. Locally, the impact of the three large IFZs, the fourth small one (at Puerto Plata) and the new ones at Bani and San Cristobal, have had a major effect in altering job opportunities, especially for women. No studies have been done of the impact of the Zones on their neighboring towns and the surrounding area. One employer interviewed for this report had been involved as a consultant at the setting up of the San Pedro de Macoris Zone, and had prepared a report on the pre-existing state of the town's economy. In his view, the establishment of the Zone had been extremely beneficial in bringing more income into the town and balancing out the economic opportunities between men and women in the region. He noted that before the establishment of the Zone, prostitution had been rife in the town but that it had fallen off dramatically with the increase in women's wage employment.

Differences in the socio-economic profile of women working in the various zones, namely La Romana and San Pedro on the one hand and Santiago on the other, reflect differences in the economic structure of the respective regions. Santiago is a long established city, the pole of the fertile northern agricultural basin, with a history of artisanal and factory industry for the domestic market. The towns of La Romana and San Pedro, on the other hand, are situated in the eastern region of large sugar plantations and cattle

ranches; the towns are smaller and the economy has little history of industrial or modern service production. In both regions the establishment of the Zones has stimulated the mobilization of a female workforce, capable of levels of productivity in assembly industries of 80 percent or so of standard US levels. But there are interesting differences in the educational levels and marital status of women in the two places. In the eastern region, the workforce contains a higher proportion of women in marital unions (62 percent in La Romana and 55 percent in San Pedro, compared with 34 percent in Santiago), and fewer currently unattached women (see Table 18). The smaller share in the two eastern Zones in the proportion of single women is quite marked. In La Romana and San Pedro the share of single women is 22 and 17 percent respectively, while in Santiago 27 percent of the workforce are single (never married) and fully 39 percent are separated, divorced or widowed.

In terms of educational attainment too, the two regions are distinct. Santiago has a somewhat better educated female workforce than the eastern Zones, with 55 percent of women workers having some high school education compared to 38 percent in Santiago and 27 percent in San Pedro. Given the variations in educational provision between town and country in the DR, it is not surprising therefore that the Santiago workforce is more urban in character: 30 percent of women workers come from the urban area, compared to 20 percent in La Romana and only 11 percent in San Pedro (Catanzaro 1986). One impact the Zones have had is to provide jobs for rural women to a surprising extent: the income generating effects have not been limited to the town itself.

These patterns are consistent with the different patterns of family residence noted above: it is much more common to find women workers living separately from children, who are left with relatives distant from the town, in the eastern region than in Santiago. Although this practice has many affective disadvantages for those involved, it does mean that the creation of the Zones has not led to an influx of migratory labor, of workers plus their families, and so has not put so heavy a strain on the urban infrastructure as might be expected.

The data also suggest different patterns of female labor force participation in the two regions. The Santiago pattern is reminiscent of the former "bipolar" participation pattern common in industrialised countries, with mothers of young children in marital unions less likely than others to take wage employment. (It would be interesting to know what proportion of partnered women employed in Santiago are in consensual unions as opposed to legal marriages, but this information is not available.) A slightly paradoxical consequence of this pattern of participation is that the dependency burden is probably higher in Santiago than elsewhere, since the separated, divorced and widowed women are most frequently the sole providers for their households. By contrast, the typical pattern in the eastern region is for women to work continuously. One consequence of the establishment of the Zones in this region is that by providing jobs for women it may have contributed to higher family incomes in this region, even if, as seems likely, average male wages may be higher in the Santiago region with the higher level of urbanization there.

## 5.2 Gender differentiation in Zone employment

IFZ employers have definite views on the productivity related differences between male and female workers, to do with work commitment, discipline and dexterity, which are on the whole consistent with what is known from other countries. One distinctive feature is that many DR IFZ employers have an explicit preference for women with dependent children, on the grounds that their work commitment and stability are superior. This is fortunate for women, among whom fertility levels are exceptionally high by international standards. It contrasts with employer preferences in Asian export processing zones, where single women without children form the bulk of the workforce: though in that case, the rationale is similar, in that this sub-group of the population is considered the most stable and committed to wage employment in these societies - though in this case by virtue of their freedom from domestic responsibilities.

There is some crude discrimination by sex in wage terms, though it is not suitable to statistical proof because of the normally high segregation of

occupations by sex. However employers report that male applicants for work demand higher wages, and are usually turned down for this reason, which suggests that there is a wage differential in the local labor market (and/or that a premium is required for men to overcome stigma for men doing "women's work", which amounts to the same thing). There is a correlation in the Zones between average wages and the proportion of men in each industry, which is indicative of the same thing. It is clear that in electronics companies, women are substantially underpaid in relation to wages paid men of similar educational attainment.

There is also differentiation of another kind. in so far as women are less well represented in the comparatively small technical, administrative and managerial sections than in the direct production sections of enterprises. but this does not reflect on a biased promotions policy on the part of management, so much as on the failure of the system of vocational and higher education in the DR to produce women with the appropriate qualifications. Managers probably do discriminate in not promoting proportionate numbers of women up out of the production line to checking and supervisory positions. But the occupational hierarchy in light assembly production is so bottom-heavy that the chances of advancement from a production line positions would be statistically small for any individual worker, even in an unbiased system. IFZ based industrialization cannot ever be a major source of employment at semi-skilled and technical levels.

### 5.3 Impact of IFZ expansion on women's national employment position

The total number of women employed in the Zones in mid-1986 was approximately 30,000; by the end of the year, the total had probably risen by a further 5,250 to 35,250. For comparison, the total female labor force was estimated to be 642,000 in 1985 (Ramirez et al, 1982). In 1980, 13.2% of the female labor force was employed in the industrial sector, mostly in manufacturing; applying the same ratio to the 1985, the number of women employed in industry would have been of the order of 85,000 at that time. The rapid expansion of IFZs may well have contributed to an increase in the proportional size of the female workforce in the industrial sector. The IFZs have evidently become a major source of jobs in this sector: they employ between one fifth and one

third of the national female workforce in manufacturing. Whatever the caveats then, expansion of IFZs in the DR has added a major new source of wage employment for women.

What difference, if any, does expansion of this sector make to occupational distribution of women's work, to women's income and women's future economic prospects? It represents no improvement in the types of jobs available, being unskilled, dead-end work. There is no evidence either that IFZ firms offer offsetting better physical conditions of work than in domestic industry (Catanzaro 1986).

By perpetuating occupational segregation by sex in the labor market, IFZs have not contributed to the assimilation of women into the employed labor force on equal terms. Nor are the wages paid IFZ women workers particularly good by local standards. They are no higher than the average available to women in the labor force as a whole, and no individual worker sees any progression in her average earnings as she gains seniority on the job. However, more information is needed for an exact comparative statement to be made on this point. Data is needed on wages earned by women of similar age, experience and educational attainment and in similar occupations in other sectors. A large number of jobs are taken by women without any education at all. The IFZs should be welcomed as a source of employment for them, at wages of roughly the legal minimum wage level, which is probably well in excess of cash wages they would be able to earn in agriculture and informal services, the only real alternative especially for the many rural migrants in the eastern region IFZs.

Apart from increasing women's aggregate income, and perhaps therefore women's current and future expectations about levels of wage income from formal employment, IFZ expansion does nothing to improve women's future employment opportunities in these broader terms. If the expansion should be halted (or reversed) IFZs will not be able to absorb much of the future increment in the female labor supply. However, some supplementary measures, as recommended below, could contribute to this end, by consolidating women's current income gains and convert them into productive skills and access to resources that would outlive employment in the Zones themselves.

### 5.3 The conditions of work in assembly production

Employment for women in the IFZs rests on a very bottom heavy employment structure of jobs, which offers minimal possibilities of advancement for production workers. The work is extremely specialized and intensive, and carries heavy overtime demands. The harshness of industrial discipline, the boredom and intensity of the work, and the long work hours are major causes for complaint among IFZ workers (Magali Pineda and Prof Helen Safa, personal communication). As far as they are concerned, its main merit is as a source of regular earnings.

The employment is less than fully secure, not for reasons to do with arbitrary dismissal but because of the impermanence of many export processing production operations. Although the rate of turnover among firms in the DR IFZs is not severe by international standards (ILO/UNCTC 1985), the average attrition rate among enterprises was considerable. Between 1970 and 1982 of the 126 enterprises that installed in the IFZs only 86 were still operating at the end of the period, and the remaining one third had withdrawn (Dunlap 1984). From the workers' point of view, the fact that in 1981 one third of all female workers had been working for their current employer for less than one year (Safa, n.d.), also suggests a degree of instability. On the other hand, in every year except 1983 the number of incoming firms exceeded those withdrawing and the total number of jobs in the Zones increased. So even if employment opportunities are insecure with any particular firm, they have been expanding in the aggregate and it is wrong to assume on the basis of these data that individual women's chances of work in the IFZs are necessarily short term. The outstanding question however is to what extent employers will enforce upper age limits in their workforces, and at this point, given the rapid increase in IFZ activities to date and the premium on experienced workers, the matter is indeterminate.

In these various respects working conditions for women in IFZs in the DR are similarly onerous to those documented for IFZ workers in other developing countries. The most important drawback is perhaps something different: that IFZ work does little to equip women for an economically productive life after they leave Zone employment.

## 5.6 Effects of Zone employment on women's social status

The little research that has been done into the impact of women's wage work on their social status in the DR focusses on the narrow issue of self-reports of women's authority position inside their household. As noted above, declared headship is scarcely affected by the relative income earning power of its adults, and conforms rather to the juridical situation. It is also reported (see chapter 2) that income contributions to the household do not relieve women's disproportionately heavy domestic work requirements in consensual unions, at least. By contrast, in other places, e.g. Puerto Rico, women's view of intra-familial authority seems responsive to economic contribution, in the sense that a larger proportion of working women report themselves as head (even when a male partner is present). By extension women are presumed in this case to be gaining in self-esteem and powers of decision making within the family (Safa, n.d.). Whether the men in these situations share the women's assessment of intra-family authority relations is an interesting but as yet unanswered question; and the extent to which reported headship can stand proxy for a whole spectrum of possible social changes is a moot point. Far more information is needed on the outcomes of industrial wage employment for women in the DR in terms of women's economic and social empowerment and the impact on family welfare.

In Safa's view Dominican women have socially unprogressive views in another respect. Women in consensual unions aspire to legal marriage, for the security and stability it brings, even at the cost of the traditional patterns of male dominance (op cit). Given women's greatly inferior economic position in the DR, described in chapter 2, it should not be held against women that they perceive things in this way. Unless and until their economic position improves, their views of the relative material benefits of marriage as opposed to consensual unions are fully rational and justifiable.

Expansion of IFZs in the DR, where employers do not on the whole discriminate against women in consensual unions in awarding jobs (and in some cases have an active preference for unmarried women with children) may help to improve the economic position of women with dependents. The IFZ enterprises have the

advantage that they mostly do not impose recruitment requirements that would exclude women from low-income households. Nor are they biased particularly towards women of urban origin.

If the IFZs' expansion is to have an important national impact, however, it needs to offer women not only more jobs but better rewarded work as well. At present wages in the Zones are well below the mean level of women's earnings in the DR. The returns to labor out of IFZ operating profits could well increase without prejudicing the national comparative advantage. The wage levels in the Zones are determined by Zone employers (with more than a hint of monopsonistic restraint) and by the minimum wage set by the Government. Without an increase in the minimum wage - a measure to which the government should give consideration - employers are unlikely to allow wages to rise. They are reluctant to see the ruling wage rate rise, since that represents an increase in their fixed costs of production. On the other hand, enterprises are ready at the present time to see some portion of their discretionary funds going to the benefit the workforce. At the present time, and for the foreseeable future too, given the buoyancy of production and market prospects for the DR, firms' discretionary funds (profits) are high. The time is ripe therefore for introducing improvements in worker services in the Zones. The next chapter recommends activities that might be introduced.

## Chapter 6

### Recommendations for improvements in worker services in the Zones

#### 6.1 Current worker services in the IFZs

Improvements in worker services in IFZs in the DR are both necessary and feasible at the present time. They are necessary because current services are inadequate, and feasible because the economic environment is so favorable to producers in the Zones that enterprises have the financial resources to undertake improvements. Market forces are already moving existing employers in this direction, and incoming firms will not be deterred by the extra cost.

By "worker services" is meant those elements of working conditions in the zones which are not intrinsic to the operations of particular enterprises, but which affect the welfare of workers and may indirectly also affect their productivity. The main services currently supplied at some level are health, transport, cafeterias and financial services. This chapter suggests potential improvements in worker services, after first describing current services and putting forward a rationale for the recommendations. Those selected serve various developmental objectives and seem viable in terms of needs of the workers and acceptability to employers. However detailed feasibility studies are clearly necessary before the recommendations can be implemented. It is not possible in this report to describe precisely the current and predicted level of demand for services, nor the appropriate quality of services, fixed and recurrent costs, best level of user fees, and so on, which all need to be considered. Some indication of practices elsewhere is given in an appendix on page 120.

The general level of services for workers currently provided in the zones is poor. Services variously provided by government, the zone authorities and enterprises are deficient in many ways. We consider the services one by one.

Health services are the responsibility primarily of government, through the national health scheme (IDSS) in which workers in registered enterprises, including all those in the zones, are enrolled. Employers pay a subvention to this scheme, which is matched by the Government. The IDSS supplies medical

services and drugs, both routine and emergency care for out-patients and hospitalizations. Coverage does not extend to workers' families. As noted in chapter 4.3, the standard of care, as well as the limited coverage, of the IDSS are subject to a universal complaint. Employers report that the Government often fails to make its matching contribution, and as a result of this underfunding its staff falls behind establishment and the supplies of drugs and equipment are inadequate. In addition, the clinics serving the zones are not in the zones themselves, but in the towns nearby.

To make up for this inadequate service, most employers provide some kind of ad hoc support for workers, ranging from supplies of Alka Seltzer on Monday mornings, a first aid kit, messengers to fetch in drugs from the pharmacy, to personal loans for medical treatment through the private sector, and in one case among the interviewees, a weekly visit by a doctor to the factory. A number of employers report that they are considering introducing private medical insurance for their employees. One or two employers are even making plans to establish small permanent medical facilities on the premises. The smallest currently operating Zone, Puerto Plata, has in fact had premises for a clinic built in the Zone, but it has no funds to operate the facility and so it has never been established. The two new Zones, at Bani and San Cristobal, both include plans for a health service of some kind, though the operating details have not been worked out.

Transport problems vary between Zones, according to the distance between the Zone and the residential areas where workers live. In Santiago, the Zone is adjacent to a large, low income residential area of the city and workers merely walk the few blocks to their place of work. In San Pedro de Macoris and particularly La Romana the issue of transport services is more severe, and remarked on by several employers as damaging to productivity. Workers in these cases make their way to work as best they can, on overcrowded buses and in service cabs; the typical cost of the journey to work in La Romana is 25 centavos one way, and travel costs take up about 6 percent of a worker's wage packet. For weekend commuters, women who leave their children with relatives in the rural area (perhaps as many as a quarter of all women workers in these two zones (see chapter 4.5)), there is additional regular long distance transport costs to be added to this. In Puerto Plata, where the zone is on

probably reduces the incidence of food poisoning significantly. Some employers reported that they had experimented with full meal service in the past, but that workers preferred to have a change of scene at the midday break and did not like the food provided by the catering service.

Only one zone, Puerto Plata, presently has any kind of communal eating facility. There are eating spaces and a small service counter, but this provides expensive snacks only and serves only a few hundred dishes each week.

The Bani zone authorities are introducing an innovatory design in the construction of shells in their zone. A communal eating area will be built to be used by the workers in blocks of five or six factories and provided with basic food storage facilities, though not a cafeteria service per se.

Financial services for workers fall into two categories: cashing of checks and personal loans. Workers are paid by check and since most do not have bank accounts, they have to rely on local moneychangers to cash the check for a considerable fee. Groups of moneychangers congregate outside the zone entrances on payday to perform this service. Most employers provide credit on a personal, ad hoc basis to workers, most commonly for medical expenses, as noted above, but sometimes for other emergencies or for personal consumption. These loans are normally in the form of an interest free advance against the next paycheck, though some companies put out more extended loan periods. One company had complemented his company credit facility by issuing workers as a Christmas bonus one year with personal accounts in a local bank opened with a nominal deposit. Companies have some self interest in providing credit of this kind. When loans are for medical expenses, employers are motivated by a concern to minimise sicknesses and time off work, and in the case of other loans the debt to the enterprise serves as an inducement to the worker to stay in the job to make repayments, and thus enhance stability of the workforce.

The La Romana zone is host to the only Zone wide worker service that exists in any location, in the shape of COOZOFRAR (The Workers' Multiple Service Cooperative of the La Romana Free Zone). Despite its title, this organization, established in 1981 with financial support from enterprises in the Zone, is presently limited to running a consumer cooperative and a fairly

some distance from the edge of the town, the municipality has established new bus routes to transport the workers. The new zone at Bani is the furthest from any concentration of population, being 8 miles from the local town; the zone authorities are having to organize a regular bus service for the workers in this case. The San Cristobal zone expects that workers will travel to the zone from both San Cristobal and Santo Domingo as well as from Haina port area, and that private sector transport services will respond to the new demand.

Anticipating that La Romana workers will strongly prefer to work at the new zone in that city, which is to be built adjacent to the main residential area of the city, some employers in the existing zone are planning to introduce transport for their workforce to induce them to stay on after the second zone opens. It is said that efforts had been made previously by the industrialists of La Romana to provide worker transport, but the attempt fell foul of a strong local feeling (at least among private sector transport operators) that the Zone had no business operating outside its territorial boundary. The Zone vehicles were vandalized and the service was withdrawn.

Cafeteria services are very badly planned at present in most locations. At the lunch hour workers spill out of the factories onto the roads and patches of lawn in front of the buildings and squat on the ground, finding shelter under trees or parked trailers. The meal usually consists of a billycan of food that the worker has prepared herself at home or that a friend or neighbor provides at cost; some workers buy prepared foods from vendors who come into the Zone area, in La Romana and Santiago, or cluster outside the gate, at San Pedro de Macoris.

Facilities are marginally better than this for some workers in Santiago and La Romana, where a few factories provide a covered eating area attached to the factory, and one or two make a room inside the building available. Renters of new shells in San Pedro, the zone with most current building activity, can include an eating area in the floor plans but this represents a marginal extra cost that enterprises usually feel they can manage without in the light of current meal practices. One or two factories provide refrigerator space for employees' brought in food, a simple facility which

large credit program. There is a small store on the zone, stocked and managed by COZOFRAR, which sells household items and basic foodstuffs, many of them subsidized through the national food program INESPRES and purchased in bulk by the cooperative. The loan program has grown quite quickly. In 1982/3 for example, total loans disbursed amounted to RD \$362,000, and covered discharge of debts (32 percent), personal necessities (25 percent), medical expenses (13 percent), construction costs (8 percent) (COOPZOFRAR, 1983 "Memoria: III Asamblea General Anual de Delegados, 1982-1983"). Workers' need to borrow on such a scale to discharge debts suggests that chronic consumer indebtedness is a major problem among Zone workforces, indicative of difficulties in meeting living costs.

Finally, one of the new zones, San Cristobal, has designated one of the new Zone buildings as a training facility for newly recruited workers, and the industrialists of San Pedro de Macoris are considering such a scheme for their own zone. Up to the present no kind of training has been carried out on a collective basis in the IFZs.

## 6.2 Criteria for selection of recommendations

IFZ employers in the DR and the operators of new Industrial Free Zones are clearly moving spontaneously in the direction of improving worker services, on both an individual and a collective basis. The fact they are doing so indicates a willingness to pay. Even if this were the issue, there is in general no need therefore for USAID or any other agency to consider extending major resources to initiate or underwrite new activities. There is nevertheless an important role for an external agency with technical assistance functions, such as USAID, to play. First of all, as an outsider it may be able to provide a stimulus to action. USAID has the great advantage in this situation that the major infrastructural loans it has made for the development of the zones in recent years give it a major voice in zone affairs, and any recommendations it may make will be strengthened by the technical assistance it can offer.

It goes without saying that recommendations for improvements in worker services in IFZs must in the first instance enhance workers' welfare and/or

material standard of living, and be valued for this reason by workers themselves. This report has been unable to address directly and systematically workers' own perceptions of their priorities in this respect. Any follow up action must take this weakness into account, and build mechanisms into the design and implementation of new activities to enable workers to express their preferences, and modify worker services in the zones accordingly. There are two main arguments in defense of the recommendations nevertheless. First, each and all of them contributes a direct or indirect benefit to workers' actual or prospective income. Therefore, while perhaps not meeting workers' priorities, they have a certain fungibility effect, by releasing some of the constraints on expenditures out of current income.

Second, it is a major exercise, demanding a carefully designed large survey, to discover workers' preferences and synthesise them into a list of priorities. Moreover, since the exercise would be dealing largely in hypotheticals, there is no guarantee that workers' preferences would not evolve as schemes began to be put into effect. So long as participatory mechanisms are included in whatever new activities are introduced, and a structure develops to nurture collective discussions amongst workers, the services will in fact become responsive to workers' needs. An analogous project in Haiti, targetted also to women factory workers, was established along these lines, providing one commonly acknowledged need in the first instance in the expectation that priorities for further activities would be made known as the project progressed.

It is in any case clear from the preceding analysis that some service improvements are in almost universal demand among workers and employers alike and that other activities, to be feasible, must be not only acceptable to employers but perceived by them to contribute to the productivity of their workforce, if the schemes are to succeed on a voluntary or quasi-voluntary (collective) basis.

In fact, to succeed, any externally suggested improvements in worker services must meet two conditions, and be justified also on national developmental grounds:

1) they must increase labor productivity in the Zones by reducing workers' time off work, and/or increasing their pace or work on the job, so that employers see that the activities contribute to their own interests; and

2) they must involve facilities or services that are more efficiently provided on a collective basis than by individual enterprises; this implies that the cost to employers is less than if they were to provide these services only within their own premises.

In addition, activities must meet developmental objectives within and beyond the employment arena, rising above the immediate interests of the individuals involved. The activities should contribute to increasing the national benefit by enhancing workers' and enterprises' productive capacity both inside and outside the Zones.

### 6.3 Appropriate implementing institutions

In each Zone there are two main institutions in operation: the corporation that owns and manages the Zone (public and/or private corporations, depending on the Zone); and the Associations of Industrialists, an organization of owners/managers of enterprises in the Zones.

The Industrialists' Associations have customarily had a simple role, acting as a channel of communication and negotiating with the managing authorities of the Zones on the level of services provided. But they are expanding their mandate, in the San Pedro de Macoris zone in particular, where a membership drive has taken place and the great majority of companies are now represented, and a small secretariat has been established. Member companies pay a levy to the Association which enables it to employ staff and undertake a few small local projects, for community relations purposes essentially.

The revitalization of the San Pedro Association is a response to a tightening labor situation, for the Association's fundamental reason for existence is to ensure good behavior by employers who stand to become rival to each other in this situation. The Association implements a no-poaching agreement, an arrangement to moderate wage increases in the zones by proscribing movement of

workers from one enterprise to another. As the expansion of the IFZs accelerates, a premium attaches to trained workers experienced in assembly line jobs. Some drainage of labor is bound to occur. Experienced supervisors are being enticed away to distant, new zones at greatly increased wages. Zone enterprises will have to let wages for these grades rise, and in the process supervisors may change enterprises within a given zone - and are said in these circumstances to take groups of the best production workers with them. The Association's main objective is to prevent primary poaching, but it will have some power to reduce secondary poaching of this kind also.

The revitalization of the Associations strengthens the rationale for USAID/DR's interest in these organizations as an institutional agent for improving worker services. Furthermore, any proposal for improvements in services for the workers will stand a good chance of adoption by the Associations if it has the effect of increasing workers' incentives to remain in the Zone where they are currently employed - and thus, given the intra-Zone no-poaching agreements, to stay with their present employer. Nevertheless, the Associations may not be the best implementors, as opposed to sponsors, of particular activities, especially when their membership is less than universal.

The other organization involved in the IFZs are the managing authorities of the Zones, public, private or mixed according to the Zone. The authorities manage the construction of new buildings and the letting of existing ones, negotiate rentals, and provide services such as cleaning of the common ways, landscape and road maintenance, garbage collections and water and power supplies.

These managing authorities tend to have a fixed and limited view of their responsibilities, and not be open to suggestions for improvements in the site or the amenities. However the managers of the new Zones at Bani and San Cristobal are much more innovative and responsive to both local interests and the incoming investors; and the authorities in the existing zones will no doubt have to become more enlightened also, if they are not to lose tenants to better endowed sites. Competition among Zones is bound to involve the provision of worker services, insofar as investors see that they contribute to

workforce stability, and more intangibly, that they enhance the modernity of the company's and the zone's image. The history of Gulf and Western shows that foreign investors have some sensitivity in these matters.

Which of the two is the appropriate implementing agency will vary among proposals and among Zones.

#### 6.4 The main recommendations

The four primary recommendations of this report are that USAID should support the establishment of better medical services, an industrial training and referral service, savings and loans facilities and pilot child care facilities for each Zone. The substance of each proposal is set out and its rationale in terms of the chosen criteria (worker need, employer acceptability, efficiency of collective provision, contribution to developmental goals); and financing options and the identity of the appropriate implementing agency are discussed. The role of USAID is also mentioned in each case.

A number of secondary recommendations are made, for improvements which might be welcomed by one or other party involved but which have less justification as development-related activities.

##### i) Medical services

The most forceful recommendation is for the establishment of small clinics in each Zone to serve all the workers, meeting their regular and abnormal health problems short of hospitalization. A small building would need to be set aside for the purpose, sufficient to house a permanently staffed clinic of at least one doctor and assistant medical and administrative support staff, with the necessary supplies and equipment. The facility would provide a round the clock service for accidental injuries (which are not uncommon in fast-paced machine using production operations) and medical emergencies and routine medical attention as well. The exact size of the operation would have to be worked out in relation to the numbers of workers in the Zone and the pattern of injury, illness and routine complaints prevalent in the region.

Workers' families, especially children, should have access to the clinic for both acute conditions and routine treatments such as vaccinations etc, if these are inadequately provided in the vicinity.

The case for encouraging introduction of such services is persuasive on almost every count. It would make an obvious and valuable improvement to workers' lives and help them to keep up their income by reducing the incidence of sickness and absence from work, and possibly reducing their expenditures on medical treatment if presently they use the private sector for treatment. If sick children were also attended to, there would be a secondary improvement in workers' earning capacity. Health complaints are a major concern to women workers according to the CIPAF survey (Magali Pineda, Director, CIPAF, personal communication) and medical care is an expensive item in the family budget, judging from the number of medical loans taken out by workers from their employers and from the La Romana workers' cooperative.

Employers are expending considerable resources at present in providing a patchwork of services to fill in for the worst deficiencies of the IDSS system. Many are prepared to spend more, and have plans to increase these services further, more often by way of a collectivized insurance schemes for employees than by increased provision at the plant itself. They commit these resources in order to reduce disruptions to their operations caused by employee illnesses, and keep up productivity. Health problems are recognized by virtually all employers to be the main problem for their workforces, and the creation of a clinic in the Zone was the single most frequently made suggestion for improvements in worker services.

Medical services would be more efficiently provided on a Zone wide basis than by individual enterprises. The size of Zone workforces (10,000 persons on site) probably lends itself to a clinic able to provide a range of medical services. Employers themselves recognise that collective provision is more cost effective and easily organized: some consider that the Zone authority should set up a clinic, and in some locations, seeing the failure of the the Zone authority to do this, the Associations are actively interested in setting up a clinic. In San Pedro de Macoris, the expansion of the Association gives them the funds to start such a venture in a small way, but the organization

but feel incompetent to manage a clinic and powerless as to how to proceed (Sr Arturo Peguero, personal communication). The interest of other employers in providing private health insurance to employees is another indication of their awareness of the efficiency of collective provision. But insurance coverage would merely support workers to get their health problems treated in the private sector in the town, losing the advantage of proximity to the workplace that an on-site clinic would provide (and not doing much to raise the level of available health care, since many private doctors in provincial towns give unsatisfactory service).

The clinic should be funded by a levy on all employers, collected either by the Zone authorities or by the Associations. Equity considerations demand that the service be available to all workers, and if the Government is to be persuaded to relinquish its present interest (through the IDSS) there must be universal coverage, as with the IDSS. As a rough guide, employers should be asked to pay for the clinic between 50 and 100 percent of their current contributions to the IDSS, if that scheme is to continue, or between 150 and 200 percent of that amount if IFZ enterprises are exempted from it. The level of the levy should be set after the financial costs of running a clinic (or a range of options, setting out the costs of operating clinics of differing size and scope have been explored. Since the IFZs are extra territorial in many respects, the Government might be prepared to exempt producers from the health scheme, on condition that there were guarantees that at least the equivalent amount would be collected from them and devoted to worker health services. This option would of course increase the resources available for the clinics. If this option were not possible, USAID might consider funding the difference, probably for a limited period until its effectiveness were proven and employers persuaded that they should take on the extra cost. The clinic would not be entirely funded by employers however, for some user charges, at least for drugs, should be instituted. User charges may be very necessary in any case to ensure quality of service.

The Zone authorities would seem to be the logical agency to collect the levy, which would be charged on all Zone enterprises. But it would have to be accountable to the Associations for proper disbursement of the funds. The funds might best in fact be handed over to the Association, which could contract with a private voluntary agency to run the clinics.

A suitable candidate would be PROFAMILIA, a well reputed PVO which has mostly been active in the population field. In the city of Santiago it has extended its family planning operation into a successful general primary health care clinic, and so has experience of this kind of operation.

Alternatively, USAID should consider placing some of the health projects it has in the design pipeline in these sites. The workforce population is very poorly served in health terms at the moment, and the fact that women would make up the majority of the clients of the service obviously makes the Zones an attractive location for maternal and child health care services, even though this would only be part of the services provided. One project currently under consideration is for a set of health maintenance organizations. IFZ employers might be most sympathetic to seeing this kind of service established, as a cross between an insurance scheme and a regular private sector medical practice, and it would obviate the somewhat clumsy procedure, discussed above, for collection and transfer of the levy funds.

ii) An industrial training/ labor referral service

The remaining recommendations have lower priority than medical services only in that they do not meet such an obvious and immediate need of all parties concerned. On the other hand, they each have a considerable justification on in terms of some need and of broader developmental considerations.

The second recommendation is for a training facility to supply to expanding and new enterprises a pool of potential workers, practiced in basic industrial routines and made generally familiar with the special production procedures of export processing operations of the kind represented in the Zones. They would follow a generic training course in clothing, leatherwork, shoes or jewelry manufacture (probably training in electronics would not be necessary, since electronics companies already train all their recruits fully), of about one month's duration. It would not however pretend to make workers entirely ready to be taken straight onto the production lines in firms that hired them, but would greatly reduce the the time needed to train them to individual firms' procedures. It would process a share of people who applied for employment in

the Zones, but not preclude employers from hiring directly from the street if they preferred. In fact employers' preferences should be monitored and used to test the effectiveness of the scheme, and ensure that its curriculum was relevant. The San Pedro de Macoris Association is actively considering the idea already, and a building has been constructed for training new workers at the new San Cristobal Zone (though without some external stimulus the shell may well get rented out as a factory).

Most of its resources would come from a levy on employers. They should be heavily involved in the operation of the scheme through the Industrialists' Associations in order to ensure that the training provided was relevant to their needs. There is also a place for the Government to play however, consistently with the developmental contribution of the scheme (see below) and because the likely agency to provide some technical assistance would be INFOTEP. This is a public vocational training organization that has a good reputation for the quality of its graduates, and which could provide trainees or equipment or possibly be contracted to supply some of the training itself. Whether or not INFOTEP becomes involved however, some financial contribution from public funds would be appropriate. Here again it may be appropriate for USAID to play a stop-gap role, providing external pump priming funds with Government concurrence until the value of the scheme is established.

An industrial training facility would have major short term and longer term developmental impacts. It will enhance the immediate attractiveness of the DR to foreign investors by relieving the costs of training up a complete new workforce from scratch, and will release some of the emerging bottleneck of trained labor which will otherwise put a damper on expansion. It is true that large international companies, such as Westinghouse, are prepared to undertake the cost and difficulty of taking on and training a completely raw workforce, but smaller companies, and particularly, Dominican owned enterprises, will be deterred. The scheme will have a double longer term impact in encouraging the productive capacity of Dominican enterprises and of the national workforce. It will facilitate the entry of Dominican firms to the Zones where they are forced into becoming internationally competitive. The one Dominican owned enterprise interviewed for this report was struggling under the costs of training workers and the need to obtain sufficient orders to maintain the

workforce on hand, so as not to have to train new workers again when business rose. The training facility will raise the industrial productivity of the Dominican workforce and increase the supply of trained workers for the domestic as well as the international sector. In addition, the facility should contribute towards breaking down sexual stereotypes, by including women in courses geared to metal working industries and other such customarily "male" occupations. A USAID funded project in Morocco was a very successful example of how women may be helped to enter new occupations of a higher technological kind, if they are given appropriate training at an early stage in the development of the industry before the "sex typing" is fixed (USAID 1982).

Although the value of the training scheme may not be apparent to individual workers, it will improve their income earning capacity in the longer term and it will be especially valuable to women for a related reason. The intense specialization of work in export processing operations means that workers are who have only been trained by one or two employers in the particular routines of their own operations leave the enterprises ill-equipped to take up other kinds of work. In particular, this kind of work scarcely prepares women at all for work in the informal sector, manufacturing articles on their own account: informal sector manufacturing or services provide most of the limited job opportunities open to Dominican women (see chapter 2). According to the CIPAF survey team, women were bitterly disappointed in this fact, for they entered factory work partly with a view to it providing them with useful training and experience for more autonomous occupations later on. A woman sewing machine operative, for example, may work for years doing specialized operations and leave no more able than before to construct a complete garment. A general, preparatory training scheme would have a valuable side-effect in giving women in this position an introduction to the production process as a whole, and making them better placed to earn an income in later life.

### iii) Savings and loans facilities

Space should be provided in the Zones for a local bank or credit institution to open a branch to serve Zone workers. The Zones are an obviously good site for serving workers, eg by cashing paychecks, and offering an easy opportunity of opening savings accounts. There is no reason why such operations should not be as commercially viable as any other branch, and they may well be more so. Zoning regulations should not preclude the siting of such customer conveniences on site, or immediately adjacent.

Once premises, or a site for premises, are found and the institution chosen by tender, there is no need for any ongoing involvement of either Zone institution. Nor would any financial input be required. In fact through rental payments etc the operation should make a small contribution to the budget of the Zone authorities or the Associations.

Apart from improving the appearance of the Zones, such a facility would play an important role on site would be an excellent way of encouraging savings among the workers and of meeting other developmental objectives. Small initially, such facilities might expand their scope, into, for example a credit scheme supporting micro-enterprises run by members of Zone workers' households, or a consumer cooperative for workers, as in the La Romana Zone. It might also be directed towards helping women industrial workers make the transition from formal manufacturing employment to informal sector, own account production.

### iv) A pilot childcare scheme

At various points in this reports it has emerged that the actual and more importantly, the prospective, demand for satisfactory childcare services is substantially unmet at the present time. Some employers mentioned it as a suitable subject for collective provision in the zones, and the Association in San Pedro de Macoris had been presented with a proposal for a facility by a church organization in the town and was prepared to support it if a feasible design could be set up and the financial cost was not great. The Secretary of the Association estimated that many women workers spent substantial sums on childcare (RD \$60 to 80 per month) and would be prepared also to pay for a

good facility, conveniently located. With some outside technical and perhaps financial support to complement their own resources, and with some small subvention from the workers using the facility, the project might be viable. Two PVOs (MUDE and PROFAMILIA had had discussions with Zone authorities in the past about the possibility of providing childcare services, but nothing had come of this.

Access to the childcare facility need not be universal, and companies with large proportions of male workers or with young single women workers predominantly might object to contributing. The Associations would therefore seem the appropriate implementing agency in this case, though they might prefer to subcontract the operation of the facility to a PVO rather than running it directly.

A childcare facility might be best not in fact physically located in the Zones, but perhaps near a school or a transport pick-up point in the town. The attractiveness of having such a facility near the Zone clinic, in terms of child health programs etc, would probably have to give way to practical considerations in some of the locations; where workers live far from the Zone (as in La Romana and to a lesser extent San Pedro), it is impracticable to expect women to bring their children so far. Women may well in any case prefer community based childcare.

Improved childcare services would be immediately beneficial for women workers, since they have responsibility for making arrangements for their children. It could also benefit male workers' wives: there is no reason why the scheme should be limited to the children of female workers. USAID's role would consist of providing technical assistance, through the study of similar schemes in other countries (for example, a scheme funded by USAID in Ghana (USAID 1980) and investigation into present arrangements elsewhere in the DR in the private and public sector. It is known that the main PVOs in the women's health and child welfare areas (PROFAMILIA and MUDE) have not to date run any schemes of this kind. USAID might also provide start-up funding, for current or capital costs, such as training of staff.

## 6.5 Secondary recommendations.

Some other services are also obvious candidates for improvement, but they are not of a kind to require external stimulus or to justify development resource expenditure.

### i) Transportation

Transportation is inadequate in La Romana and San Pedro de Macoris Zones. In La Romana, the women workers consider poor transportation the main work-related problem they have to deal with (Prof Helen Safa, personal communication). In this case however, employers will find it necessary to act when the second IFZ in La Romana city, closer to workers' homes, is built. If they do not improve transportation at that point they will see a mass transfer of workers to enterprises in the much more conveniently located second Zone.

There may be scope for collective action nevertheless. The Zone authorities or the Association might be invited to anticipate the problem and introduce group transport sooner rather than later. Negotiations should be started with the private sector transport operators, whose present service is unsatisfactory, in search of a collaborative solution. For example, the Association (perhaps with USAID financial support, but more likely with own generated capital or credit) might buy a number of mini-buses and lease them to local operators, or employ drivers to operate the vehicles to pre-arranged schedules. Again, USAID might be able to provide technical assistance to help the Association members, who are experienced in assembly manufacturing but not in the mechanics of operating a transportation system. Improvements in transportation should be self-financing over the long term, and the system set up to conform to normal standards of commercial viability.

In San Pedro de Macoris the stimulus on the IFZ (whether the authority or the Association) to take action to improve transportation is less immediate. Even so, the general competition between Zones will develop as expansion proceeds, and USAID could bring to the attention of the IFZ that it is falling behind other Zones in this respect.

## ii) Cafeterias

Eating arrangements in the IFZs similarly demand improvement, for hygiene and safety reasons at least. No grand solutions are necessary here, certainly enterprises should not be pressed individually or collectively to provide catered food. However, the example of some firms in providing brought in snacks and drinks at breakfast or at breaks and when overtime is worked could be more widely followed. The Associations should be encouraged to ask all member enterprises to provide refrigerator space for workers to store their lunches. New factory shells should always include a sheltered outside eating area, at minimum extra construction cost. If the arrangement being tried at Bani, for small communal eating areas to be shared among workers from small sets of contiguous factories, work well then this may be suggested as the norm for future constructions. Even in existing Zones, where the space is more or less full, there may be room for a casual arrangement of this kind to be introduced, so that workers are not forced into the street to take their meal.

Whatever improvements come about, workers should not be forced to remain in the workplace during the lunch break. The opportunity to move about outside, after sitting for hours at the production line, and to meet friends from other enterprises, however briefly, is valuable. Enforced eating in-plant would certainly be resisted.

### 6.6 The value to women of the proposed services.

All the proposed facilities will benefit men and women together, but women may benefit especially from the first three. Health problems seem to be more prevalent among women, no doubt in association with the high levels of fertility found among women and the large dependency burden they have to carry. The industrial training scheme will improve women's economic life chances beyond the Zones, where their opportunities are presently restricted and women's earnings much lower than men's. Savings and loan facilities would be valuable for women, in reducing the cost of borrowing, which is probably done presently largely through the expensive, informal money market, for medical and other necessities, and in supporting small scale productive

activities carried out by the women themselves (most likely after they leave Zone employment, but on the basis of savings established during that time) and, concurrently with their factory employment, by their families.

The DR has an increasingly good record in credit and micro-enterprise schemes which reach women, but the demand is clearly not yet met among women IFZ workers, judging from the extensive replacement credit obtained from the La Romana workers' cooperative.

None of the proposed activities, however, is to be targetted exclusively at women. In order that the first three recommendations fulfill their potential for women, great care has to be taken in the design and implementation phases of the projects, to ensure that women are included among the beneficiaries in appropriate numbers and that the content of the activities (the spectrum of conditions treated at the clinics, the curriculum in the industrial training scheme, the borrowing conditions in the financial institutions) is suitable to women's special needs.

TABLE 1

FEMALE AND MALE PARTICIPATION RATES  
IN THE DOMINICAN REPUBLIC

1960-1980

TASAS DE PARTICIPACION FEMENINA EN LA ACTIVIDAD  
ECONOMICA POR EDAD  
REPUBLICA DOMINICANA 1960, 1970 y 1980

Grupos de Edad	1960		1970		1980	
	Total	Urbana Rural	Total	Urbana Rural	Total	Urbana Rural
TOTAL	11.0	21.6 8.9	27.0	29.7 24.9	37.6	35.9 42.0
15-19	9.0	16.6 6.8	22.6	22.8 22.8	37.9	19.4 22.5
20-24	12.2	23.2 4.7	22.6	33.7 24.2	45.5	41.6 34.0
25-29	12.2	25.0 4.4	22.6	28.2 23.4	47.8	45.6 30.4
30-34	12.2	24.7 2.1	22.9	34.8 24.9	46.2	44.0 42.0
35-39	12.4	23.3 6.0	22.1	35.2 24.1	47.1	46.2 42.0
40-44	12.6	24.4 6.0	22.9	32.7 27.5	42.9	43.6 43.9
45-49	12.0	22.9 6.6	27.9	31.6 26.9	42.6	37.2 40.6
50-54	12.9	19.9 6.0	27.3	28.8 25.6	39.7	24.1 34.0
55-59	11.1	12.7 6.9	25.9	27.4 23.3	29.5	25.5 32.6
60-64	9.9	14.1 6.6	27.8	28.7 29.9	26.8	22.8 25.1
65-69	7.2	16.0 4.9	20.0	21.0 22.8	19.8	11.7 22.6
70-74	4.5	6.0 5.0	21.9	17.0 21.2	17.1	9.0 22.0
75 y más	2.2	2.4 2.2	20.7	16.9 24.0	9.6	6.4 11.6

FUENTE: Oficina Nacional de Estadística: Censos Nacionales de Población de 1960 y 1970. Oficina Nacional de Estadística y Oficina Nacional de Planificación: Encuesta Nacional de Mano de Obra Urbana de junio de 1960 y Encuesta Nacional de Mano de Obra Rural de octubre de 1960.

TASAS DE PARTICIPACION MASCULINA EN LA ACTIVIDAD  
ECONOMICA POR EDAD  
REPUBLICA DOMINICANA 1960, 1970 y 1980

Grupos de Edad	1960		1970		1980	
	Total	Urbana Rural	Total	Urbana Rural	Total	Urbana Rural
TOTAL	21.2	37.9 22.6	31.0	42.9 34.1	51.4	41.7 49.0
15-19	22.1	33.6 26.2	35.8	42.9 35.3	37.9	41.7 36.0
20-24	32.0	31.2 46.8	32.6	77.1 36.9	62.9	78.6 38.7
25-29	27.0	35.0 22.4	31.6	31.4 32.2	52.6	42.0 37.7
30-34	32.6	30.4 32.7	34.6	34.6 34.6	34.9	31.2 32.9
35-39	32.8	32.2 32.8	32.9	34.2 32.1	35.7	34.1 32.6
40-44	32.5	32.1 32.6	32.3	34.2 37.1	34.9	32.6 37.9
45-49	32.2	37.0 32.3	39.0	33.0 32.1	39.1	32.7 33.9
50-54	37.9	37.0 32.2	32.6	32.6 39.0	32.9	32.1 32.0
55-59	32.7	34.6 37.3	32.2	37.4 34.9	37.6	37.7 34.8
60-64	32.1	35.9 35.3	35.2	31.6 37.1	31.7	32.1 32.1
65-69	31.0	72.2 32.2	32.6	76.0 35.3	70.8	37.8 34.3
70-74	23.2	34.9 39.6	29.9	32.4 32.3	34.1	37.5 38.3
75 y más	22.9	32.7 30.0	37.0	32.5 73.4	33.9	22.5 34.1

FUENTE: Oficina Nacional de Estadística: Censos Nacionales de Población de 1960 y 1970. Oficina Nacional de Estadística y Oficina Nacional de Planificación: Encuesta Nacional de Mano de Obra Urbana de junio de 1960 y Encuesta Nacional de Mano de Obra Rural de octubre de 1960.

Source: Baez, 1985

TABLE 2

PARTICIPATION, EMPLOYMENT, AND UNEMPLOYMENT RATES IN THE  
URBAN POPULATION, BY SEX, DOMINICAN REPUBLIC

1980-1983

POBLACION TOTAL DE 15 AÑOS Y MAS POR SEXO SEGUN CONDICION DE ACTIVIDAD ECONOMICA. ENCUESTAS MANO DE OBRA URBANA. AÑOS  
INDICADOS. EN PORCENTAJES.

CONDICION DE ACTIVIDAD ECONOMICA	1980 (ZONA URBANA) <sup>1)</sup>			1980 SANTO DOMINGO <sup>2)</sup>			1983 SANTO DOMINGO <sup>3)</sup>		
	TOTALES	HOMBRES	MUJERES	TOTALES	HOMBRES	MUJERES	TOTALES	HOMBRES	MUJERES
1. TOTAL 15 años y más	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2. Pcb. no Ec. activa	47.6	28.1	68.3	65.6	24.7	63.7	40.3	23.8	60.9
3. Pcb. económicamente activa	52.4	71.9	31.5	34.2	75.3	36.3	59.7	76.2	39.1
A) <u>Ocupados:</u>	<u>81.0</u>	<u>83.7</u>	<u>75.6</u>	<u>79.1</u>	<u>82.3</u>	<u>73.9</u>	<u>78.6</u>	<u>80.9</u>	<u>74.7</u>
B) <u>Desocupados:</u>	<u>19.0</u>	<u>16.3</u>	<u>24.4</u>	<u>20.7</u>	<u>17.7</u>	<u>28.1</u>	<u>21.4</u>	<u>19.1</u>	<u>25.3</u>
-Cesantes	56.0	69.6	58.7	30.0	76.6	49.0	66.0	76.9	50.5
-Trabajador nuevo	46.0	10.6	51.3	32.0	20.4	59.0	33.7	23.2	48.8

FUENTES: 1) Encuesta Nacional Urbana de Mano de Obra, junio 1980. Edic. ONAPLAN, julio 1982, Cuadro No. 21, P.64.  
Los títulos de las categorías fueron modificados para unificar las dos encuestas, pero en realidad la misma definición  
"operacional" utilizada por las fuentes. Cuadro No. 1, Pág. 10.

2) Encuesta Nacional Urbana de Mano de Obra, junio 1980. ONAPLAN.

3) Encuesta de Mano de Obra en Santo Domingo, ONAPLAN, febrero 1983. Documentoación de PREALC, S.D. 1983.

Source: Lemberth and Nieves, 1986

TABLE 3

SECTORAL DISTRIBUTION OF THE LABOR FORCE, URBAN AREAS,  
DOMINICAN REPUBLIC, 1970, 1980 and 1983

POBLACION ECONOMICAMENTE ACTIVA URBANA SEGUN SECTORES: PRIMARIO, SECUNDARIO Y  
TERCIARIO, POR SEXO. 1970, 1980, 1983. EN PORCENTAJES.

Sector	Censo 1970 (urbana) <sup>1)</sup>			Urbana Nacional: 1980 <sup>2)</sup>			Santo Domingo: 1983 <sup>3)</sup>		
	Total	Hombre	Mujer	Total	Hombre	Mujer	Total	Hombre	Mujer
TOTALES	100.0	66.0	32.0	100.0	66.0	34.0	100.0	62.3	37.7
Primario <sup>a)</sup>	10.0	12.5	4.5	7.6	10.7	0.6	1.1	1.5	0.4
Secundario <sup>b)</sup>	22.5	27.0	12.6	30.3	36.7	16.4	29.5	37.2	15.8
Terciario <sup>c)</sup>	41.8	39.5	46.7	60.1	51.6	70.6	69.4	61.3	63.8
No especificado	25.7	21.0	36.0	2.0	1.0	4.5	-	-	-

a) Agricultura y afines, explotación de minas y canteras.

b) Industria manufacturera; construcción; electricidad, gas, agua y servicios sanitarios; transporte, almacenamiento y comunicaciones. (\*)

c) Comercio al por mayor y menor; servicios comunales, sociales y personales; establecimientos financieros, seguros, bienes inmuebles y servicios prestados a las empresas.

(\*) La rama de actividad "transporte, almacenamiento y comunicaciones" usualmente se ubica en el sector terciario. Nosotros creemos que no es muy adecuado. Por ejemplo, consideramos que el transporte (o por lo menos un sector de él) forma parte del área productiva. Sin embargo, esta es una discusión que trasciende los límites de este trabajo.

Fuentes.

- 1) Censo Nacional de Población 1970. R.D. en cifras. Vol. IX 1980. Cuadro 441-02. P. 354, población de 10 años y más.
- 2) Encuesta Nacional Urbana de Mano de Obra, junio 1980. ONAPLAN, Ed. julio 1982, Cuadro 15, P. 35. Población de 15 años y más.
- 3) Encuesta de Mano de Obra en Santo Domingo, febrero 1983. ONAPLAN. Documento PREALC. Santo Domingo 1983.

TABLE 4

STATUS OF THE EMPLOYED LABOR FORCE BY SEX, URBAN AREAS,  
DOMINICAN REPUBLIC

1970, 1980 and 1983

POBLACION TOTAL DE 15 AÑOS Y MAS POR SEXO SEGUN CONDICION DE ACTIVIDAD ECONOMICA. ENCUESTAS MANO DE OBRA URBANA. AÑOS INDICADOS. EN PORCENTAJES.

CONDICION DE ACTIVIDAD ECONOMICA	1980 (ZONA URBANA) <sup>1)</sup>			1980 SANTO DOMINGO <sup>2)</sup>			1983 SANTO DOMINGO <sup>3)</sup>		
	TOTALES	HOMBRES	MUJERES	TOTALES	HOMBRES	MUJERES	TOTALES	HOMBRES	MUJERES
TOTAL OCUPADOS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
-Empleador	5.3	5.8	2.8	5.1	6.2	2.6	3.2	4.2	1.2
-Asalariados:	67.0	55.4	73.6	73.6	69.6	80.9	71.1	62.7	75.2
A sueldo fijo	37.2	51.4	40.5	54.0	59.0	75.0	59.2	52.6	71.6
A destajo	10.3	12.7	5.1	9.7	10.6	3.9	11.9	16.1	3.9
Otros	0.3	0.4	0.1	-	-	-	-	-	-
-Trab. por Cto. propia	18.7	21.0	12.1	14.5	17.0	7.7	17.7	20.5	12.6
-Pen. no remunerados	2.3	2.7	4.5	1.2	1.2	1.3	2.2	1.0	2.0
-Trabajador ocasional	3.7	4.2	0.8	3.6	4.0	7.5	5.0	6.5	0.1

FUENTES: 1) Encuesta Nacional Urbana de Mano de Obra, junio 1980. Edic. CIAPLAN, julio 1982, Cuadro No. 21, P. 46. Los títulos de las categorías fueron modificados para unificar las dos fuentes, pero se mantiene la misma definición "operacional" utilizada por las fuentes. Cuadro No. 1, Pág. 10.

2) Encuesta Nacional Urbana de Mano de Obra, junio 1980. CIAPLAN.

3) Encuesta de Mano de Obra en Santo Domingo, CIAPLAN, febrero 1983. Documento Muestra de PREALC. S.D. 1983.

TABLE 5

DISTRIBUTION OF TOTAL AND EMPLOYED LABOR FORCE ACCORDING TO INCOME  
FROM MAIN OCCUPATION, BY SEX, SANTO DOMINGO  
1980, 1983

POBLACION DE 15 AÑOS Y MAS SEGUN CONDICION ECONOMICA Y NIVEL DE INGRESO  
POR SEXO. SANTO DOMINGO, R.D. 1980, 1983.

CONDICION ECONOMICA Y NIVEL DE INGRESOS	TOTAL	(%)	
		HOMBRE Employed Labor Force	MUJER Employed Labor Force
<b>1980<sup>1)</sup></b>			
1. <u>TOTAL POBLACION 15 años y más</u>	<u>100.0</u>	<u>46.0</u>	<u>54.0</u>
Econ. no activa	45.8	21.7	63.7
Econ. activa (PEA)	54.2	75.3	36.3
2. <u>TOTAL PEA:</u>	<u>100.0</u>	<u>63.8</u>	<u>36.2</u>
PEA Desocupada	20.7	17.7	26.1
PEA Ocupada	79.3	82.3	73.9
3. <u>OCUPADOS SEGUN INGRESO:</u>		(100)	(100)
Menos de RD\$50	13.5	9.1 (11.1)	21.2 (28.7)
50 a menos 125	17.0	15.5 (18.8)	19.6 (26.5)
125 a menos 200	19.3	22.1 (26.8)	14.3 (19.4)
200 a menos 275	9.4	10.9 (13.2)	6.9 (9.3)
275 a menos 500	9.9	12.1 (14.7)	6.0 (8.1)
500 y más	6.7	8.4 (10.2)	3.8 (5.1)
Ignorado	3.4	4.2 (5.1)	2.0 (2.7)
Total ocupados según ingresos	<u>79.3</u>	<u>82.3</u>	<u>73.9</u>
<b>1983<sup>2)</sup></b>			
1. <u>TOTAL POBLACION 15 años y más</u>	<u>100.0</u>	<u>46.6</u>	<u>54.4</u>
Econ. no activa	44.3	25.5	60.7
Econ. activa (PEA)	55.7	74.5	39.3
2. <u>TOTAL PEA:</u>	<u>100.0</u>	<u>62.3</u>	<u>37.7</u>
PEA Desocupada	21.4	19.1	25.3
PEA Ocupada	78.6	80.9	74.7
3. <u>OCUPADOS SEGUN INGRESO:</u>		(100)	(100)
Menos de RD\$50	11.1	6.7 (8.3)	18.3 (24.5)
50 a menos 125	18.2	14.2 (17.6)	24.7 (33.1)
125 a menos 200	18.2	21.3 (26.3)	13.0 (17.4)
200 a menos 275	12.3	15.1 (18.7)	7.7 (10.3)
275 a menos 500	10.6	13.0 (16.1)	6.5 (8.7)
500 y más	7.3	9.3 (11.5)	0.1 (0.4)
Ignorado	0.9	1.3 (1.6)	0.3 (0.4)
Total ocupados según ingresos	<u>78.6</u>	<u>80.9</u>	<u>74.7</u>

Source: Lambert and Nieves, 1986

TABLE 6

FEMALE POPULATION BY MARITAL STATUS  
AND AGE, DOMINICAN REPUBLIC

1980

DISTRIBUCION PORCENTUAL DE LAS MUJERES  
SEGUN ESTADO CIVIL Y GRUPO DE EDAD  
REPUBLICA DOMINICANA 1980

MUJERES								
Estado Civil	GRUPOS DE EDAD							Todos los Grupos de Edad
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Concubina	15.0	38.3	46.6	41.7	42.0	38.3	33.1	33.6
Casada	2.5	13.0	21.8	34.5	37.1	41.1	39.4	31.2
Divorciada o Separada	6.4	13.7	13.7	14.4	16.5	16.2	17.9	12.8
Viuda	0.0	0.5	0.4	1.2	1.3	4.3	7.2	1.4
Soltera	76.1	24.5	11.5	8.2	2.6	3.1	2.4	31.0

FUENTE: Consejo Nacional de Población y Familia. Encuesta Nacional de Fecundidad de 1980.

NOTA: Concubinato es el nombre jurídico de las uniones consensuales.

Source: Baez, 1985

TABLE 7

## DISTRIBUTION OF THE EMPLOYED FEMALE LABOR FORCE,

1960, 1970 and 1980

**DISTRIBUCION PORCENTUAL DE LA POBLACION ECONOMICAMENTE  
ACTIVA FEMENINA DE 15 AÑOS Y MAS DE EDAD  
SEGUN RAMA DE ACTIVIDAD ECONOMICA  
REPUBLICA DOMINICANA 1960, 1970 y 1980**

Rama de Actividad Económica	1960		1970		1980	
	%	Proporción de Mujeres en cada Rama	%	Proporción de Mujeres en cada Rama	%	Proporción de Mujeres en cada Rama
<b>TOTAL</b>	100.0	10.5	100.0	25.9	100.0	27.2
Agricultura, Silvicultura, Caza y Pesca	10.0	1.7	22.9	12.0	16.0	11.8
Minas y Canteras	0.0	0.8	0.1	17.7	0.2	12.1
Industria Manufacturera	19.2	17.5	6.7	19.2	19.2	22.1
Construcción	0.1	0.3	1.3	12.8	0.4	2.3
Electricidad, gas y agua	0.2	4.2	0.1	15.7	0.6	17.8
Comercio	13.4	21.8	5.5	20.5	18.9	33.4
Transporte, almacenamien- to y comunicación	0.4	1.8	1.4	9.9	0.5	6.3
Estudios Financieros y oficinas	-	-	1.6	21.9	1.6	30.5
Servicios	68.5	82.6	22.4	42.4	43.7	52.9
Actividades no bien especificadas	2.2	2.6	32.8	47.2	2.6	62.7

FUENTE: Oficina Nacional de Estadística: Censos Nacionales de Población de 1960 y 1970. Oficina Nacional de Estadística y Oficina Nacional de Planificación: Encuesta Nacional de Mano de Obra Urbana de junio de 1980 y Encuesta Nacional de Mano de Obra Rural de octubre de 1980.

Source: Baez, 1985

TABLE 8

WOMEN IN SERVICE SECTOR EMPLOYMENT,  
DOMINICAN REPUBLIC

1980

DISTRIBUCION PORCENTUAL DE LA POBLACION ECONOMICAMENTE  
ACTIVA FEMENINA DE 15 AÑOS Y MAS DE EDAD  
EN LA RAMA DE SERVICIOS, SEGUN TIPO DE SERVICIO  
REPUBLICA DOMINICANA 1980

<i>Tipo de Servicio</i>	<i>Distribución Porcentual</i>
TOTAL	100.0
Administración Pública y CEA	10.9
Servicios de saneamiento y afines	16.1
Servicios del hogar	64.9
Otros servicios	8.1

FUENTE: Oficina Nacional de Estadística y Oficina Nacional de Planificación: Encuesta Nacional de Mano de Obra Urbana de junio de 1980 y Encuesta Nacional de Mano de Obra Rural de octubre de 1980.

Source: Baez, 1985

TABLE 9

OCCUPATIONAL DISTRIBUTION OF EMPLOYED LABOR FORCE, BY SEX  
URBAN AREAS, DOMINICAN REPUBLIC

POBLACION ECONOMICAMENTE ACTIVA SEGUN GRUPOS OCUPACIONES POR SEXO. ZONA URBANA 1970, 1980.

GRUPOS OCUPACIONALES	POBLACION ECONOMICAMENTE ACTIVA								
	TOTAL 1970 <sup>1)</sup>		HOMBRES		MUJERES		TOTAL 1980 <sup>2)</sup>		
	ABSOLUTO	%	ABSOLUTO	%	ABSOLUTO	%	%	%	%
TOTAL	472,450	100.0	321,445	100.0	151,005	100.0	100.0	100.0	100.0
0. Profesionales, técnicos y afines	27,813	5.9	14,435	4.5	13,378	8.9	4.6	3.7	7.3
1. Gerentes, Administradores y Funcionarios de categoría directiva	2,924	0.6	2,352	0.7	572	0.4	3.7	4.5	1.9
2. Empleados de oficinas y afines	68,958	14.6	46,330	14.4	22,628	15.0	9.4	7.1	14.4
3. Vendedores y afines	43,711	9.3	34,752	10.8	8,959	5.9	13.7	14.4	12.3
4. Agricultores y trabajadores agrícolas	47,325	10.0	40,060	12.5	7,265	4.8	7.2	10.3	0.6
5. Conductores de medios de transporte, choferes de transporte público y afines	25,439	5.4	23,465	7.3	1,954	1.3	4.7	6.6	0.1
6. Artesanos y operarios en ocupaciones relacionadas con: hilandería, construcción, mecánicas, artes gráficas y vestuario.	84,324	17.8	69,393	21.6	14,941	9.9	21.9	27.1	10.6
7. Obreros jornaleros	57,783	12.2	33,591	10.4	24,192	16.0	7.5	9.9	2.1
8. Trab. del Hogar y en Servicios Personales	48,199	10.2	17,198	5.4	31,001	20.5	20.2	11.3	39.4
9. Otras ocupaciones no identificadas	65,974	14.0	39,859	12.4	26,115	17.3	6.9	4.9	11.5

1) La P.E.A. es de 10 años y más.

2) La P.E.A. es de 15 años y más.

Source: Lemberg and Nieves, 1986

TABLE 10

MONTHLY EARNINGS FROM MAIN OCCUPATION, BY  
SEX, DOMINICAN REPUBLIC

1980

INGRESO PROMEDIO MENSUAL PROVENIENTE DEL TRABAJO  
PRINCIPAL DE HOMBRES Y MUJERES OCUPADOS DE 15 AÑOS Y MAS  
DE EDAD, PARA ALGUNOS GRUPOS Y SUBGRUPOS OCUPACIONALES  
POR ZONA DE RESIDENCIA  
REPUBLICA DOMINICANA 1980

RAMA DE ACTIVIDAD	ZONA URBANA			ZONA RURAL		
	Ingreso Promedio Mensual en (RD\$) <sup>1</sup>		Relación	Ingreso Promedio Mensual en (RD\$) <sup>1</sup>		Relación
	Hombres	Mujeres	Ing. Homb. / Ing. Mujer	Hombres	Mujeres	Ing. Homb. / Ing. Mujer
Profesionales, técnicos y afines	432	172	2.5	265	221	1.1
Gerentes, Administradores y afines	587	225	2.6	225°	121°	2.3
Empleados de oficinas y afines	212	227	0.9	175	76	2.3
Vendedores y afines	209	111	1.9	117	34	3.4
-Vendedores de tiendas	207	110	1.7	127	31	4.1
-Vendedores ambulantes	152	77	2.0	38	49	0.8
Agricultura y afines	185	97°	1.9	37	76	0.5
Artisanos y operarios	204	116	1.8	216	32	6.8
-Sastres, modistas y afines	165	102	1.6	36	43	0.8
Obreros y jornaleros	125	104	1.2	193	63°	3.1
Trabajadores en servicios personales y afines	183	62	2.9	135	39	3.5
-Servicios del hogar	224°	44	5.1	38	25	1.5
-Otros servicios	160	39	4.1	139	60	2.3

(\*) Los cifras con asteriscos significa que fueron calculadas con menos de 10 observaciones.

(1) Un peso dominicano (RD\$1.00) equivalía al momento de la encuesta a US\$0.73.

FUENTE: Oficina Nacional de Estadística y Oficina Nacional de Planificación: Encuesta Nacional de Mano de Obra Urbana de junio de 1980 y Encuesta de Mano de Obra Rural de octubre de 1980.

Source: Baez, 1985

TABLE 11  
NUMBER OF FIRMS IN IFZs

1969-1986

	(1) No. of Firms in Operation	(2) New Business Starts
1969	na	1
1970	3	0
1971	5	3
1972	9	1
1973	17	5
1974	28	5
1975	31	3
1976	38	3
1977	47	7
1978	60	10
1979	70	10
1980	79	12
1981	87	7
1982	86	11
1983	99	12
1984	na	14
1985	na	16
1986	124	24

Source: (1) 1969-82, Dunlap, 1984; 1983, 1986, Janka, 1986  
(2) IFZ Authorities Inc., 1984

TABLE 11A

NUMBER OF FIRMS OPERATING IN IFZs  
BY MAJOR PRODUCT, 1970-1982

	Apparel	Elec.	Tobacco/ Cigars	Leather Shoes	Misc.	Total No. of Firms
1970	1		1		1	3
1971	1	2	1		1	5
1972	3	2	1		3	9
1973	7	3	1	1	5	17
1974	15	5	1	2	5	28
1975	16	4	4	3	4	31
1976	20	4	4	4	6	38
1977	26	4	3	6	8	47
1978	36	4	4	8	8	60
1979	43	3	5	9	10	70
1980	44	4	7	11	13	79
1981	46	4	8	12	17	87
1982	47	2	8	14	15	86
.						
.						
1986	70	5	6	19	24	124

Source: 1970-1982, Dunlap, 1984  
1986, Janka, 1986

TABLE 12  
EXPORTS FROM IFZs

1970-1983

US\$000

	La Romana	San Pedro	Santiago	Total	Annual Increase (per cent)
1970	134.6			134.6	-
1971	432.9			432.9	222
1972	1,355.5	1.7		1,357.2	213
1973	1,511.0	97.1		1,608.1	18
1974	2,158.0	601.4		2,759.4	72
1975	3,927.9	1,184.4	218.0	5,330.3	93
1976	5,100.0	1,440.0	1,351.0	7,891.5	48
1977	6,366.2	2,651.8	3,851.0	12,869.0	63
1978	10,460.8	4,070.1	6,477.0	21,007.9	63
1979	14,835.2	5,506.7	6,773.2	27,133.1	23
1980	19,624.2	6,574.8	7,327.0	33,526.0	24
1981	26,554.3	8,743.0	12,235.0	47,532.3	42
1982	25,074.6	9,303.6	13,507.0	47,885.2	1
1983*	na	na	na	57,800.0	-

\*January-November only, estimate

Source: 1970-1982, Free Zone Authorities Inc., 1986  
1983, Dunlap, 1984

TABLE 12A  
IFZ EXPORT REVENUES SURRENDERED TO THE CENTRAL BANK,  
BY INDUSTRY, 1980-1982  
US \$ MILLION

	Apparel	Elec.	Tobacco/ Cigars	Leather/ Shoes	Total
1980	16.8	3.0	5.6	2.3	32.2
1981	27.7	3.3	9.1	3.5	49.0
1982	28.7	2.9	9.6	4.4	51.0

Source: Dunlap, 1984

TABLE 13  
EMPLOYMENT IN IFZs BY ZONE

1970-1986

	La Romana	San Pedro	Santiago	Puerto Plata	Total
1970	126				126
1971	362				362
1972	1,281				1,281
1973	1,432	394			1,826
1974	2,106	1,138			3,244
1975	1,780	1,189	1,175		5,144
1976	3,694	1,549	1,530		6,673
1977	4,483	2,367	2,125		8,975
1978	5,839	2,646	3,060		11,545
1979	6,802	2,758	4,600		14,160
1980	7,659	3,344	5,201		16,404
1981	9,231	3,402	6,764		19,397
1982	7,250	3,465	7,360		18,075
1983	7,519	5,489	7,907		20,915
1986	10,621	11,752	12,731	950	36,054

Sources: 1970-83, Dunlap S (1984)  
1986, Janka G (1986)

TABLE 14

NUMBER OF FIRMS AND EMPLOYMENT  
BY PRODUCT AND ZONE, MARCH/APRIL 1986

	La Romana			San Pedro			Santiago			Puerto Plata		
	No. of Firms	Employment \$	(%)	No. of Firms	Employment \$	(%)	No. of Firms	Employment \$	(%)	No. of Firms	Employment \$	(%)
Clothing	17	8,350	(78.6)	25	6,309	(53.7)	24	7,874	(61.8)	4	666	(70.1)
Shoes	-	-	-	8	1,914	(16.3)	5	1,886	(14.8)	1	63	( 6.6)
Tobacco	1	492	( 4.6)	-	-	-	5	1,488	(11.7)	-	-	-
Leather Garments	-	-	-	3	180	( 1.5)	-	-	-	2	138	(14.5)
Leather Articles, handbags etc.	-	-	-	-	-	-	5	988	( 7.8)	-	-	-
Jewelry	-	-	-	4	1,981	(16.9)	-	-	-	1	83	( 8.7)
Electronics	2	1,120	(10.6)	1	340	( 2.9)	2	211	( 1.7)	-	-	-
Medical Gauzes etc.	1	589	( 5.6)	2	325	( 2.8)	-	-	-	-	-	-
Other	1	70	( 0.7)	8	703	( 6.0)	2	284	( 2.2)	-	-	-
Total	22	10,621	(100.0)	51	11,752	(100.0)	43	12,731	(100.0)	8	950	(100.0)

Source: Janka, 1986

TABLE 15

AGE DISTRIBUTION OF WOMEN WORKERS IN IFZs  
AND DOMESTIC INDUSTRIES

1981

Age Group	IFZ Workers %	Workers in Domestic Industry %
16-19	15.2	6.4
20-24	32.5	10.7
25-29	24.2	18.1
30-39	23.4	34.6
40 +	4.8	30.2
	<u>100.0</u>	<u>100.0</u>

Source: Reyes, 1986

TABLE 16  
MARITAL STATUS OF WOMEN  
WORKERS IN IFZs

1981

<u>Marital Status</u>	<u>Per Cent</u>
Single	22
Married	17
Consensual Union	34
Widowed	2
Divorced	25
<hr/>	
TOTAL	100

Source: Catanzaro, 1986

TABLE 17  
HOUSEHOLD STATUS OF  
WOMEN WORKERS IN IFZs, 1981

Per Cent

Status	(1)	(2)		
	Total	Total	La Romana and San Pedro de Macoris	Santiago
Head of Household (a)	-	31.5	29.0	35.8
Head of Household (b) (of whom main income provider)	26 (38)	-	-	-
Living with Husband Nuclear Household	- 11	30.8 -	35.5 -	26.6 -
Living with Natal Family Extended Nuclear Household	- 39	37.7 -	35.5 -	41.5 -
Other	24	-	-	-
Total	100	100	100	100

Notes

- (a) Women with or without children, without a male partner, or women providing sole or main economic support for their household
- (b) Women respondents' opinion of headship on basis of knowledge and control of household affairs

Source: (1) Catanzaro, 1986  
(2) Duarte and Carter n.d.

TABLE 18  
 MARITAL STATUS OF WOMEN WORKERS IN  
 IFZ BY ZONE

1981

Per Cent

STATUS	SAN PEDRO	LA ROMANA	SANTIAGO
Single	16.6	21.4	27.3
Married & Consensual U.	55.4	62.2	33.8
Widow, Divorced & Sep.	28.6	16.3	39.0
TOTAL	100.0	100.0	100.0

Source: Ricourt, 1981

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### **Methodological Note**

Much of the material for the analysis in this report is drawn from secondary sources, noted in the bibliography. Original information on the situation in the IFZs, mostly concerning worker services and the employment practices and preferences of enterprises operating in the Zones, was gathered in August 1986 from interviews with owners, managers and personnel managers of twelve IFZ enterprises. These enterprises were chosen, not so much to constitute a statistically sound sample as to reflect the varieties of enterprise that were known to be operating and to catch the extremes of employment situations. Thus the set included a disproportionate number of long established firms, to get a sense of the evolution of the Zones. It also included more electronics firms, locally owned enterprises, firms with Asian rather than US capital, and firms from the smallest, newest Zones than their strength on the ground warranted in order to gain some insights into, respectively, employment practices in a more technologically advanced industry, the special difficulties (if any) of Dominican capitalists, non-US employers' practices, and conditions for workers and employers in the most recently developed locations, which are in many respects raising the standard of provision for enterprises and workers in IFZs.

The meetings with company managers took the form of a structured interview, lasting about 1 hour. The interview schedule (which was not given to the respondent) is reproduced on page iii of this Appendix. The interview was conducted in English, where possible, otherwise in Spanish.

As noted in the Preface and in chapter 6, constraints of time and resources made it impossible for ICRW to carry out a systematic, direct appraisal of IFZ workers' opinions of current worker services and their priorities for change. However second hand information on these issues was available from a number of sources. The Director of CIPAF, Magaly Pineda, and Isis Duarte reported on the findings in this respect of the interview teams which had carried out surveys of women workers in the IFZs under their direction in 1981, and Helen Safa passed on her initial impressions from a follow-up survey of

approximately 20 women workers from the La Romana Zone which she had carried out in July 1986. The team was also lucky to be able to have an illuminating discussion with a CIPAF staff member based in Santiago, who had lengthy experience organizing discussion groups for women workers in the Santiago Zone and knew well their views of desired improvements in services.

Besides having access to these informants, the research team did attempt to carry out a mini-survey of workers in the Zones, using a short yes/no questionnaire designed for group responses. The questions concerned workers' family status, work experience, use of current services and desires for improvements in services. (The questionnaire is available on request from ICRW.) However it proved impracticable to survey workers in this way, and the information gathered from 4 trial runs was not used in this report. Employers were not prepared to release workers from production time, and in one case where permission was granted there was no private place for the discussion to take place. It was decided therefore to do group interviews among workers outside the enterprises during the lunch break. But the break is very short (1/2 hour for most firms) and it was impossible to choose a sufficiently isolated group of workers, gain their cooperation and administer the questions within such a short time. The questioning also aroused the curiosity of too many people, who would add themselves to the respondents as the discussion proceeded, so that it was impossible to contain a group to a fixed membership.

**EMPLOYER QUESTIONNAIRE**

**Cuestionario para los Gerentes Generales Encargados de Personal**

**We are working for AID, trying to identify labor employment constraints to current operations and future expansion of Free Zones industries.**

Estamos realizando un estudio para la AID, tratando de identificar los impedimentos en relación a la fuerza de trabajo (mano de obra disponible) en relación a las operaciones industriales actuales y a futura expansión de las Zonas Francas Industriales en la República Dominicana.

1. **Name of company/manufacture**  
Nombre de la Empresa
  
2. **Date of establishment**  
Año de establecimiento: \_\_\_\_\_
  
3. **Ownership (another company)**  
Name: origin  
Casa matriz y origen
  
4. **Number of employees**  
Número de empleados/obreros: \_\_\_\_\_
  - 4.1 **Male No.**  
No. Hombres
  
  - 4.2 **Female No.**  
No. Mujeres
  
- 4a. **Occupational distribution**  
Distribución ocupacional:
  - 4.3 **Employees Male No.**  
Empleados No. Hombres \_\_\_\_\_
  
  - 4.4 " **Female No.**  
" No. Mujeres
  
  - 4.5 **Employees: Male No.**  
Empleados: No. Hombres \_\_\_\_\_
  
  - 4.6 " **Female No.**  
No. Mujeres \_\_\_\_\_

**5. Production:**  
Produccion

1. **Subcontract** (How many principals? No. \_\_\_\_\_)  
Subcontratada ( Cuantas? No. \_\_)
2. **Own Account** \_\_\_\_\_  
Cuenta Propia
3. **Mixed** \_\_\_\_\_  
Mixta

**6. Sales: Specify percentage or absolute numbers**  
Ventas: Especifique porcentajes o numeros absolutos.

Year 1985	%/#	Previous Years
USA		USA
<u>Año 1985</u>	%#	<u>Años Anteriores</u>
EUA		EUA
<b>Puerto Rico</b>		<b>Puerto Rico</b>
<b>Other (Specify</b>		<b>Other (Specify)</b>
<b>Otro (Especifique)</b>		<b>Otro (Especifique)</b>
_____ )		)

**7. Present market access provision?**  
Leyes utilizadas para regular acceso al mercado?

- \_\_\_\_\_ 1. 807.00
- \_\_\_\_\_ 2. CBI
- \_\_\_\_\_ 3. Other  
Otro

**Future: any advantage to you from CBI?**

Sobre el futuro: Le representa alguna ventaja el Programa de la Cuenca del Caribe (CBI)?

**Do you think you have good market prospects for your product for this or other reasons?**

Piensa usted que tiene buenos prospectos (oportunidades) en el mercado para sus productos por estas razones o por otras razones? \_\_\_\_\_

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**8. Recruitment criteria for shop floor workers and others**  
Criterios para el reclutamiento de empleados/obreros?

1. **Best educational level**  
Nivel educacional
2. **Previous work experience**  
Experiencia previa
3. **Previous training**  
Adiestramiento previo

How much training do you have to give here? Would that time be reduced if workers came with more skills/qualifications  
Duración del adiestramiento \_\_\_\_. Se podría reducir el período de adiestramiento si los obreros llegaran con más destrezas?

4. **Age?**  
Determinada edad \_\_\_\_\_

Other (specify)  
Otro (Especifique) \_\_\_\_\_

Do you keep records on these variables employment applications in your personnel files? How many years do you keep these files?  
Mantiene la empresa los expedientes o solicitudes de empleo de los obreros en archivo? Cuánto tiempo los guarda?

History of operations with respect to labor supply/evolution of your labor requirements  
Historia de las operaciones en relación a la oferta de la mano de obra/evolución de los métodos de producción de la empresa

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9. **Any employment problems now: Absenteeism**  
**Turnover**  
**Lack of skills/wor discipline**  
**poor productivity**  
**other (labor organization)**
- (compared to where?)

Algún problema de trabajo ahora: Ausentismo  
 Cambios o reemplazos  
 frecuentes de personal  
 Falta de destrezas  
 Falta de disciplina  
 Baja productividad  
 (En relación a qué o cuál (país, empresa, etc. Textual:

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Otro (especifique) Por ej. paros laborales, renuencia a trabajar horas extras, etc. \_\_\_\_\_

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10. What improvements would you like to see among people applying for work in terms of

skills  
 experience  
 adaptability  
 time availability  
 other

Cuáles cambios quisiera usted ver entre las personas que solicitan empleos, en terminos de:

destrezas \_\_\_\_\_  
 experiencia \_\_\_\_\_  
 adaptabilidad \_\_\_\_\_  
 tiempo disponible \_\_\_\_\_  
 otro \_\_\_\_\_

10.a If better workforce in this sense were available would you be interested in moving into more profitable product lines? What sort of products would this involve?

Si la fuerza de trabajo disponible fuera mejor en los términos referidos estaría usted interesado en iniciarse en la producción o elaboración de productos mas lucrativos? Textual

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11. Do you presently provide any special facilities for your workers?

- medical services (doctors, nurses, simple drugs?)
- transport
- childcare facilities
- extra training/education
- cafeteria/access for food sellers
- family planning
- credit (for what?)
- other

Provee usted algunos beneficios o servicios especiales a sus empleados/obreros, tales como:

servicios médicos (médicos, enfermeras, consultas médicas, prescripciones médicas)

- transporte \_\_\_\_\_
- guardería \_\_\_\_\_
- adiestramiento/becas \_\_\_\_\_
- planificación familiar \_\_\_\_\_
- crédito (para que) \_\_\_\_\_
- otro \_\_\_\_\_
- Textual \_\_\_\_\_

12. Are you aware of any special difficulties experienced by your workers (e.g. connected with their family responsibilities)?

Está usted enterado/al tanto de algunas dificultades especiales enfrentadas por sus trabajadores (por ejemplo, problemas relacionados a responsabilidades en el hogar)? Comentarios

13. In your opinion would it be helpful to your operations if the Free Zone authority provided facilities/services to overcome this (these) problem(s)?

En su opinión, sería de ayuda a las empresas si las autoridades administrativas de las Zonas Francas Industriales ofrecieran las facilidades y servicios requeridos para superar estos problemas  
Textual y Opinión \_\_\_\_\_

Thank you for your time and cooperation.  
Le agradecemos su cooperación y su tiempo,

Susan Joeke y Quintina Reyes  
ICRW, Washington, D.C.  
c/o USAID/Dominican Republic

### Comparative Information on Services in IFZs in the Region

(This note is based on information kindly supplied in telephone interview by Mr Stephen Sugarman, Sugarman Associates, an organization assisting US investors establish and operate offshore production facilities in the Caribbean and Central America.)

The currently "fashionable" site for US offshore investors in the Caribbean and Central America is Costa Rica. However, in terms of the trainability and productivity of the labor force and the costs of investing and producing, El Salvador and the Dominican Republic are the front runners in the region at the present time. But El Salvador is discounted by investors because of the political situation, so that the DR is the most attractive site on cost grounds.

The appeal of Costa Rica lies in the country's highly educated labor force, the availability of good middle managers etc.. In the single Zone in Costa Rica the provision of amenities is left up to individual enterprises, and the Zone authorities do little more than provide a functioning site for operations. Enterprises mostly supply worker services and other amenities to a high level in this location. Panama has the best amenities for IFZ workers in the region, but this is because the Zone is situated right in the city. The DR is the leading exponent of the Free Zone concept in the region and has opportunity to develop it further, not only in providing better collective services but also in setting more advanced contractual conditions for Zone lessees.

There is tremendous variety in the standards of amenities and management of the different Zones in the DR. San Pedro and Puerto Plata are the worst in appearance, facilities and prospects for growth.

The poor standard of food provision in the DR IFZs is perhaps the most striking way in which IFZs in the DR fall behind standards commonly accepted in offshore manufacturing enterprises. (They are on a par, however, with practices in Dominican enterprises outside the Zones.) Most offshore

producers are prepared to provide an in-plant cafeteria service with some subsidy element. Sugarman Associates has done controlled studies in the DR and other countries in the region which show an improvement in worker productivity when nutritionally adequate meals (sometimes with vitamin supplements) are served on the premises. Productivity rises because time is saved when workers remain in the factory, the interruption caused by members of workers' families bringing in prepared food is obviated, supply of good meals increases workers' loyalty to the plant, and, for workers from low income households whose total food intake is inadequate, providing lunch prevents fatigue and increases work intensity in the afternoons.

Cafeteria services are best provided by the individual plants, not Zone wide. All enterprises operating in the Zones should be required to include cafeteria space in their shells, preferably internally, and allowed the option of contracting a local food supply company to serve prepared lunches to the workers. The San Cristobal zone authority has designated cafeteria space, which is a considerable step forward, but has unfortunately in its leasing contracts not given lessees the option to contract in a food service company to provide in-plant meals. This exclusion should be removed.

Medical services are another area where current amenities in the DR are totally inadequate. Sugarman Associates' client investors normally include a fulltime nurse and physician on the company payroll, accountable to the employer and providing medical services to the workforce to US standards. In Mr Sugarman's view, medical services are best provided in this way, rather than on a collective basis, but this view is based on the normal inefficiency of provision of services by Zone authorities rather than being a question of cut and dried principle.

Most offshore producers in Costa Rica operate an in-plant savings and loan scheme for the workers, and the DR Zones could encourage their lessees to move in the same direction.

In Mr Sugarman's view, childcare is not an appropriate service to be provided in IFZs, mainly because there are just too many children for management of such an amenity to be practicable: it would swamp the mainstream managerial

functions of the Zone authorities. Nevertheless, his client companies in the La Romana Zone have had a long-standing arrangement with a private sector childcare center in La Romana city for them to take children of Zone workers. If childcare facilities are to be developed in this and other Zones, they would be best undertaken off-site in a similar way.

## **Information on Childcare Facilities in Some Developing Countries**

(This note is drawn from the results of a questionnaire concerning social infrastructure for working mothers in industry, carried out in 1983 among member countries by the International Labour Organisation, Geneva. The findings are summarized in Women at Work, Number 2, 1985, page 34-5.)

In **Colombia**, the provision of creches, previously a direct responsibility of employers, was taken over by the Government in 1974 through the creation of pre-school care centers. Employers have to contribute 2 percent of their monthly wage bill for the upkeep of these centers and for the programmes of the Family Welfare Institute.

In **Cyprus** pre-school childcare facilities doubled between 1973 and 1981.

In **Egypt** employers are required by law to provide childcare facilities.

In **Hong Kong** childcare centers are operated under Government supervision.

In **India** women workers with children below 6 years of age are provided with childcare facilities on the factory premises. Child welfare centers, including pre-school education, free food, etc., are run by a number of state governments and voluntary organization.

In the **Philippines** there is a nation-wide network of about 8,000 day-care centers, up from about 6,000 in 1974.

In **Turkey** a 1983 enactment provides for facilities for nursing women working in industry, in the shape of rest and feeding rooms and nurseries in factory premises.