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**BASELINE STUDY OF
POPULATION AFFECTED BY
EXPORT PROCESSING ZONES**

EXECUTIVE SUMMARY

PRICE WATERHOUSE

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EXPORT PROCESSING ZONES**

FINAL REPORT

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PART ONE - BACKGROUND

CHAPTER 1 - INTRODUCTION

This study deals with the impact of Export Processing Zones (EPZs) on socio-economic conditions in the Sula Valley, and attempts to identify problem areas for public services and economic infrastructures related to the growth of the EPZs.

The study is divided into two main sections. The first is an empirical study of the worker population in the EPZs of Choloma and Villanueva, and of the surrounding communities. The aim of this section is to establish "baseline" data against which to measure the continuing impact of the growth of EPZs over the coming years. We conducted two major surveys: of a sample of EPZ workers, and of a sample of households in the urban areas of the municipalities of Choloma and Villanueva close to the EPZs.

We present the results of these surveys in Part Two of the present report, alongside official data which allow for comparison between the populations we studied and the national population or relevant sub-categories. We also comment on similarities and differences with the worker population in the Mexican EPZs. We recommend a system to update the information presented in future.

The Part Three is concerned with public services and economic infrastructures in the areas of influence of the EPZs. We present the results of a survey of EPZ owners and users which identifies possible problem areas, and then we make a "Cook's Tour" of the different services, giving up to date data on the present state of the service and on existing plans for future development, commenting briefly on the extent to which each service appears to be coping adequately with the challenges posed by the rapid changes in the regional economy.

To set the scene, in chapter two we describe the growth of EPZs in the Sula Valley and the projections for future growth.

CHAPTER 2 - THE GROWTH OF EPZS IN THE SULA VALLEY

The mushrooming growth of employment in private sector EPZs is one of the success stories of Honduran economic policy in recent years. The legislative basis was provided by the US government's Caribbean Basin Recovery Act of 1983 and by reforms to Honduran legislation under the Azcona administration (1986-90). The economic structural adjustment (ESA) policies of the Callejas administration (1990-94) further boosted the EPZs by reducing dollar labor costs and sending positive signals to potential investors. As a result, Honduras is now firmly on the map for "maquila" investments by developed

country firms seeking to reduce costs by transferring offshore their more labor intensive operations.

Investment in the construction of EPZs totalled L.122.5 mn in the three years 1989-91, with a further L.78 mn in the pipeline. All of the EPZs are located in the Sula Valley on the north coast, where they are grouped in three clusters around the San Pedro Sula. The biggest EPZ cluster is sited in the municipality of Choloma to the north of San Pedro Sula, on the road to Puerto Cortés. Here are sited CHIP Choloma, ZIP Choloma, INHDELVA, ZIP San Miguel and Parque Industrial Galaxy. The second cluster is to the south of San Pedro Sula in the municipality of Villanueva: ZIPs Búfalo and Villanueva, with a further ZIP planned for the near future (ZIP Buenavista). The third cluster is at La Lima on the south east side of the city, on the road to El Progreso, where ZIP Continental is sited.

The rapidity of EPZ employment growth is underlined by data collected for the present study in June 1992, which give a total of 17,500 - already 12% up on the total reported by FIDE in March 1992. The factory area in use in EPZs in March 1992 represented only 26% of the total planned space at that date. So there is medium-term potential for a cuadrupling of EPZ employment in the Sula Valley, to around 60,000 direct jobs, and the number of direct jobs created by the EPZs could easily double over the next two to three years.

To date, there have been no data available on the impact of EPZ development in Honduras on household incomes and expenditures, and on other indicators of the quality of life. Part Two of the present study aims to fill this gap. This part of our study also analyses the available evidence on the labor market impact of EPZ development and the associated problem of migratory flows. Part Three of the present study looks at the existing social and economic infrastructures of the Sula Valley area and at plans for their development over the immediate future, in an effort to identify obstacles to continued success of the EPZ sector.

In summary, the purpose of the present study is to make a start on the provision of data related to EPZ development which point up areas which may require policy initiatives, in order that Honduras should not experience some of the difficulties which have characterized the Mexican border area and other maquila centers in recent years.

PART TWO

SOCIO-ECONOMIC CHARACTERISTICS OF THE EPZ WORKFORCE, THEIR FAMILIES AND COMMUNITIES

CHAPTER 1 - SURVEY METHODOLOGY

This chapter describes in detail the two major surveys undertaken: a workplace interview of 200 EPZ workers in the EPZs of ZIP Choloma, INHDELVA and ZIP Búfalo; and a community survey, of 300 households in the urban areas of Choloma and Villanueva. It summarizes the scope of the questionnaire instruments, and describes the sampling methodology.

CHAPTER 2 - BASIC CHARACTERISTICS OF THE EPZ WORKFORCE

Age, sex and family structure

Women are the overwhelming majority of the EPZ workforce, accounting for 84% of our workforce sample. Women under 31 years old constituted 75% of the whole sample. Women are even more heavily represented amongst the sub-set of machine operators, which constitutes 75% of the total sample: 87% of machine operators in the sample were women.

Some 35% of all the workers are under 21 years old; a further 39% are between 21 and 25. Most women in the EPZ workforce are single; only 30% are either married or have a common law spouse. 20.5% of the women had one child, 14.5% had two children and 16.8% had three or more children. That over half of those who are mothers should be single parents underscores the instability of family relations in the marginal urban communities which are the main source of EPZ labor. Very nearly 50% of the workers live with their parents as subordinates.

Education

Basic literacy and primary education is a standard requirement for EPZ employment. The majority (52%) had only had primary education, but 41% had some level of secondary schooling. Over half the workers have some sort of technical education prior to working in the EPZ. Forty five percent of the women had been trained as a seamstress. 20% of workers were attending some sort of education or training program.

Travel to work

Approximately half the EPZ workers are within half an hour of their workplace, and almost all the rest are within an hour. The bus is the most important means of travel, accounting for 65% of all workers, while a further 30% walk and 5% use cycles.

Working hours

The overwhelming majority of EPZ workers have a normal work week of between 40 and 50 hours per week; a small proportion works over 50 hours. There is a great willingness to work overtime.

Childcare

Family members provide 81% of childcare support for workers with children under 13 years old (who are 43% of the workforce); 12% pay a childminder (see page 14 below for a discussion of workplace nurseries).

Earnings of EPZ workers

The average earnings for EPZ workers in our workforce survey was L.670.6 per month; for women the figure was L.647.9 and for men, L.786.2. These averages are well above the statutory minimum wage of L.501 per month which was in force at the time of our survey. Some 55% of EPZ workers are their family's biggest earner.

Average incomes of households with EPZ workers are 35% higher than those with none. While only 3% of EPZ households had an income under L.401, 14.5% of non-EPZ households fell in this category. 63% of EPZ households had monthly income of over L.801, compared with 46% of non EPZ households.

Social security and medical services

In our interviews with employers we found none whose workers were not inscribed in the IHSS. ZIP Choloma had the IHSS Sistema Médico de Empresa (SME), or company medical system. At ZIP Búfalo, there was off-site IHSS medical cover. Employers at INHDELVA subscribed to the minimum IHSS Disability, Old Age and Death regime. The companies in INHDELVA (as in other parks without IHSS medical cover) contract private doctors. Employees were not always easily able to discern the legal basis for the medical provision they receive.

Workers use company medical services frequently: 65% used them at least once over the last 6 months. However, there is zero use by spouses and remarkably little use by children, in spite of the cover given by SME. Since over half the workers have at least one child, this suggests there may be some access problems. 70% of workers said the workplace medical service was good value.

Social integration and organization of EPZ workers

The only type of social activity which is generalized among EPZ workers is religion, in which 61% claimed involvement. 22% were involved in sport and 7.5% in their local "patronato" (neighborhood committee).

CHAPTER 3 - SOCIOECONOMIC CONDITIONS IN CHOLOMA AND VILLANUEVA

Housing conditions

In Choloma, we found an average of 5.6 people in each household, while in Villanueva, the figure was a little lower, at 5.3. Most households live in individual houses or apartments; just 8% in Choloma and 12% in Villanueva live in some sort of shared arrangement. A high proportion in Villanueva are outright owners of their homes (73%, against 55% in Choloma). In Choloma, more people have a housing loan (12%) and more people rent their homes (25%, against 20% in Villanueva). Rents are somewhat higher in Choloma, at L.104 against L.87 a month. Water supply coverage is better in Villanueva. Electricity supply is good in both cities (over 90% coverage). Choloma has better sanitary facilities at the household level. In Villanueva, only 14% have flushing toilets and only 9% are connected to public sewers. Instead, latrines predominate.

Artefacts

Choloma households generally have slightly more artefacts, suggesting greater household wealth. However, it is not clear that this is related to EPZ earnings: the breakdown for artefacts of EPZ worker households compared with non EPZ households shows few marked differences, though the former are somewhat more likely to have push bikes and black and white TVs.

Opinions on public services and on EPZs

Among the public services, water is number one priority for improvement, followed by street drains, sewers and street lighting. Electricity was regarded as easily the best of the services.

In Choloma, 76% said the impact of the EPZs was positive or very positive; in Villanueva 85% said the same. However, there is also a downside. Somewhat surprisingly, most thought that prostitution would rise due to the EPZs, in spite of the increased employment for women. Most also expected pollution to worsen, although the industrial processes linked to the EPZs are not generally dirty ones. People also expected more crime and alcoholism.

Incomes, spending and saving in Choloma and Villanueva

Average personal incomes (excluding those with no income) in Choloma are L.614 a month, and in Villanueva, L.624. Both figures are below the average for EPZ workers of L.671 reported above. The households' reported average expenditure is L.835 for Choloma and L.734 for Villanueva. 60% of household expenditure in Choloma, and 70% in Villanueva, is spent on food. Paying off debts is the second largest item in households in Choloma (10%) and Villanueva (8%).

The most interesting difference between household spending patterns where there is an EPZ worker, compared with households where there is none, is that the former are spending much more paying off debts. This suggests that EPZ employment leads to increased borrowing, which becomes possible because the household's income has risen to finance it.

Scarcely 15% of households in the Community survey reported any savings. However, the few households which do save have significant amounts of financial assets: the 39 saver households in Choloma averaged L.1,365; the 10 in Villanueva, L.2,084. A higher proportion in the Workforce survey (50%) reported personal savings, and the savers averaged L.579. Bank deposits and savings and loan association accounts are the main types of asset held.

Educational characteristics of the workforce in Choloma and Villanueva

The proportion of the population with no education of any type stood at 15% in Choloma and 13% in Villanueva. In both cases, the figure is well down on that given for the urban areas of the two municipalities in the 1988 census (21% and 26% respectively), suggesting that educational coverage is improving. The proportion of the population between 5-29 involved in education is 44% in Choloma and 55% in Villanueva. The predominant technical skill is sewing. 10% in Choloma and 7% in Villanueva had been trained in this area. (See page 21 below for a brief discussion of trends in primary enrollment).

CHAPTER 4 - EPZ DEVELOPMENT, LABOR SUPPLY AND MIGRATION

Labor force projections

Even with a doubling in female participation rates, to 50%, we estimate the economically active female population aged 15-29 (the main supply of EPZ labor) for the municipalities of San Pedro Sula, Choloma, Villanueva, La Lima and El Progreso at a maximum of 52,000 in 1992. This is less than projected EPZ employment of 60,000 for the Sula Valley reported above. However, it is well above EPZ employment to date, and there is still slack in the local labor markets in the EPZ areas.

Evidence from our surveys on participation and unemployment rates

In fact, the female participation rate in Choloma is now almost 50%, compared with the rate of 26% in the 1988 census. In Villanueva, the rate is 33%, compared with 11% shown in the census. These figures suggest that participation rates have indeed responded to increased job opportunities. Probably as a result of increased participation rates, unemployment rates now appear higher than 1988 census figures: at 27% in Villanueva and 23% in Choloma - compared, with 7% and 12%. (Our definition of unemployment includes all the economically active who have no work of any kind; it excludes the underemployed. We define the economically active as those who are working, who have looked for work in the last month, or who say they wish to work immediately. See table 4.3 of the main report for full definitions.)

Migration and the EPZs

Another possible explanation of the apparent slack in Choloma is that immigration has boosted population growth. In our workforce sample, 21% said they had moved to the zone especially to work in the EPZs. This implies that some 3,500 workers have already moved their home to take advantage of EPZ employment. 17% had moved within the Department of Cortés, while 29% had come from Santa Barbara. Twelve per cent had come from Copán (beyond Santa Barbara), while Yoro (adjacent to the east) had supplied 10%, and Atlantida (beyond Yoro) had supplied 7%. Of the 110 EPZ workers we found in the Community survey, 52% were migrants to the area, and 10% had arrived in the last year. Again, most came from Cortés and Santa Barbara. These figures suggest that the EPZs have reinforced the long established pattern of migration from the depressed economies of the west towards the Sula valley.

Previous employment of EPZ workers

Our sample of EPZ workers is split roughly 50-50 between those who had left another job to come to work in the EPZ (53.5%) and those who had not previously been working (46.5%). Workers previously employed in domestic service account for 8% of the total sample, while those who had jobs as manual workers accounted for some 20%. If we apply these percentages to the total EPZ employment at May 1992 of 17,500, this would suggest that the EPZs have drained 1,400 domestic servants from the middle class households of the San Pedro Sula area, and 3,500 workers from industrial employment outside the EPZs.

Financial motives are dominant both for workers who came from other jobs and for those previously unemployed. Previous monthly earnings of workers who came from other jobs averaged L.330 for operatives - well below the average earnings of basic labor in the EPZs (reported above) of L.635. This is further confirmation that the impact of EPZ employment on household income is strongly positive.

Conclusions

The data presented in this chapter point towards some obvious conclusions, which have implications for public policy. First, that, notwithstanding increased participation rates, the capacity of the EPZ sector to fulfill the medium term growth potential of 60,000 jobs will depend to some extent on immigration to the zone. Second, that the migratory pressure might be reduced if public transport were improved to widen the recruitment areas of the EPZs. Third, that it would now make sense for planners to begin to promote EPZ development in other areas where there is more obvious slack in the labor market. And fourth, that the EPZs' development creates training needs outside the sector itself, especially in related industries which lose labor to the EPZs.

CHAPTER 5 - FAMILY PLANNING AMONG EPZ WORKERS AND THEIR COMMUNITIES

Before we report our results for this section, a word of warning is in order. It is not easy to get accurate survey data on family planning issues, and specialized survey methodologies have been developed to overcome this. While we followed the questionnaire formats used in recent specialized surveys, we did not have interviewers specially trained to spot evasive answers, so it is possible that our data are not wholly reliable. For this reason, we also report data for the San Pedro Sula area (Region 3 of the Ministry of Public Health) from the national Epidemiology and Family Health Survey (EFHS), undertaken in 1991 for the Ministry of Public Health and ASHONPLAFA, as an alternative point of reference on some key variables.

In our community sample, 42% of women aged 15-44 said they were sexually inactive, giving this as the reason they did not use any family planning technique. Thirty five percent of the sexually active (20% of the total sample) said they plan their families, and 65% of the active (38% of the total sample) said they do not plan. There was a slightly higher level of sexual activity in the Choloma sample, and a lower level of planning: only 30% of the sexually active plan in Choloma, against 41% in Villanueva. In the workforce sample, there is a lower level of sexual activity than in the community as a whole, with 52% inactive, reflecting the lower average age of the sample.

Data from EFHS for Region 3 show that 26% of women aged 15-44 said they had never had any sexual relationship. This is well below our community survey figure of 42% sexually inactive. Although the question asked in the two surveys is a different one (since a person may be sexually inactive at present even though they have been active previously), the difference between the two figures suggests the possibility that we are over-reporting sexual inactivity among our community sample. EFHS also found a higher level of family planning activity among the sexually active than is the case in our community survey data: 51% of the sexually active women for whom there were data had used some form of contraception in the last thirty days, as against 38% who said they used contraception of any sort in our community sample.

According to data from our workforce survey, the sexually active are much more likely to plan than was the case for the community sample: 54% plan and 46% do not plan. This is some indication that the workplace family planning programs of the IHSS and of ASHONPLAFA are having some impact. In both the community and workplace surveys, the planners are divided about 50-50 between those who decide themselves to plan, and those who do so jointly with their partner.

Among the non-planners in our surveys, fears for health (40%), belief in being "careful" (22%) ignorance of methods (11%) and partner's opposition (9%) are the main reasons for not planning in the community sample. This is a somewhat different pattern from the workplace sample, where economic reasons were most important (38%), followed by fears for health (28%) and partner's opposition (21%). Religious and moral reasons do not figure as motives for not planning. The pill and condom are the best known forms of contraception, followed by the coil (IUD) and female sterilization. These four methods were also the most used. There is more knowledge about contraception among the workforce than in the community as a whole.

CHAPTER 6 - RECOMMENDATIONS FOR FUTURE MONITORING OF EPZ IMPACT

We recommend annual surveys of 200 EPZ workers, spread over all the EPZs, covering two firms in each. The sample should be redrawn each year, and should be structured to get a good proportional representation of different product types and company nationalities. The best way of updating the "baseline" community information is to return to exactly the same 300 houses in each study period. In this way, we will get a very clear impression of the changing conditions of the households reported on in the present study. We will be able to see exactly how their employment position, income, spending, social services etc. develop as the EPZs continue growing. We present a set of key indicators for EPZ impact at the end of this chapter.

PART THREE

THE SULA VALLEY'S SOCIAL AND ECONOMIC INFRASTRUCTURE IN THE FACE OF EPZ DEVELOPMENT

CHAPTER 1 - INTRODUCTION

The point of departure for this section of the study was a round of structured in-depth interviews with the owners or senior managers of the EPZs, of companies located in the EPZs, of managers of export companies located outside the EPZs, and of officials of organizations linked to the EPZs.

CHAPTER 2 - PROBLEM AREAS ACCORDING TO THE EPZ SECTOR

The primary concern of our interview subjects was potential labor problems. Social infrastructure for the worker communities was considered important, with 20 mentions. Direct services to export companies were less of a worry, as were the need for long term planning and environmental control and political stability.

CHAPTER 3 - DIRECT SERVICES TO THE EPZS

Electricity

The electricity service was generally viewed as good by both EPZ owners and their clients, but two EPZ owners (Continental and Villanueva) complained of delays in getting an adequate service installed. The effective constraint on immediate supply for the different EPZ areas is local transmission capacity. Part of the problem is a lack of forward planning by EPZ developers. ENEE needs to see properly defined projects one to two years before new transmission lines and sub stations need to be operational. The recent establishment of a liaison committee between ENEE and the CCIC has improved forward planning. ENEE believes it is capable of satisfying the EPZs' needs in the coming years. However, there is a general concern about the future overall supply capacity of ENEE in the face of growing demand, and we were left in little doubt that serious disruptions in the reliability of electricity supplies would be extremely damaging to the EPZs' future development.

Telephones

Two EPZ managers reported serious problems with the phone service. It was difficult to get lines installed, and calls were frequently cut off and lines were always busy. However, the other EPZs had a more positive point of view. Park users were generally positive about the quality of the phone service and negative about its cost - especially for international calls. FIDE officials were concerned about line shortage for the future.

The uneven response of HONDUTEL to the needs of the EPZs reveals a general problem with the advance planning of industrial developments' telecommunications needs. While it is true that HONDUTEL does not resolve crises with appropriate urgency, it must also be said that other actors do not seem to have made its job easier. Apparently, neither the park developers or the municipal authorities responsible for development planning had either informed or consulted HONDUTEL about the likely communications needs of the EPZs.

Water and sewage and environmental control and the EPZs

(This section summarizes material from three different parts of the main report: Part 3, Chapter 3.3 and Part 3 Chapter 5.1 and 5.6)

All of the EPZs have their own independent water supply. No-one reported problems with supplying the present needs of users. However, the different EPZ locations have differing underground conditions which affect their capacity to pump water and also affect the likely impact their use of water resources on the surrounding community.

We found a general consensus among people we interviewed that there is now a serious problem of pollution in the water courses of the Sula Valley - especially in the River Chamelecón and the Laguna de Alvarado, into which it runs. This is not particularly the result of EPZ development - rather, it is the result of economic development and population growth in the region in general. However, it poses the need for much stricter regulatory norms on new industrial developments of all sorts, and for close attention to the environmental consequences of an influx of migrant population in search of the jobs provided by the EPZs.

In fact, the apparel manufacturers who dominate the EPZs are not by their nature industrial polluters. Other industries in the area, such as Cementos Bijao, Brooms and Mops (both in Choloma) and TEXHONSA (Búfalo) are much worse offenders in terms of the impact of their industrial processes on the surrounding atmosphere and water courses. To date, in the case of the EPZs, the issue of pollution relates rather to the impact of large human concentrations: i.e. to sewage and solid waste disposal.

However, this could change in the future, as the industrial composition of EPZ activity develops towards other types of activity, including chemicals and textile manufacture. The Mexican frontier zone of the Rio Grande is an example of the type of problems which could arise if an adequate regulatory framework is not established beforehand. A proposed new General Environmental Law (in Congress at October 1992) includes a general requirement for environmental impact assessments for polluting industries, which should help in this direction. The problem is not simply one of formal powers, but also of effective implementation. Local authorities already have some formal powers to regulate industrial development, but they are not very effective in practice. The issue of sewage treatment provides a barometer of the balance of power between EPZ industries and

regulators. The local authorities have the legal power to decide whether a new development needs an oxidization system, or can dispose of raw sewage into the surrounding surface water systems.

Only three of the seven EPZs we visited (ZIPs Choloma, San Miguel and Búfalo) said they treated or planned to treat their sewage before discharging it. There is a perfect correlation between the set of EPZs who treat their sewage, and the set which receives external funding conditioned on sewage treatment. Other EPZs who have funds from USAID via FIDE, or are entirely self financed, have not installed oxidization plants.

Sewage treatment is a point of conflict between ZIP Villanueva and the local authority. The EPZ has no treatment plant, and has connected its sewage system to the municipality's new collector without permission. The city's mayor claims that the EPZ could within three years exhaust the capacity of the city's oxidization tanks.

Shipping, customs and port services to EPZs

Users had positive opinions on the quality of shipping services out of Honduras; but there was also a consensus that prices were high. Several Asian firms complained that it could be more costly to ship a container from Puerto Cortés to the south coast of the USA than it was to ship it across the Pacific to California.

The EPZ trade has become an important part of the Honduran shipping business - especially on east coast routes, where they account for 23% of southbound and 19% of northbound volume. There is ample excess shipping capacity, making it unlikely that the EPZ sector will be constrained by this factor. Industry spokesmen estimated excess capacity at 40% in June 1992. If this figure is right, and with other shipping demand stable, the maquila industry could triple from 1992 levels before hitting shipping capacity constraints.

The main grouse of users is not the quality or quantity of shipping services, but the cost. The industry is partially organized into a cartel on a Central American level - the Central American Liner Association, CALA. In Honduras, CALA has three members, who account for 70% of the East Coast market. However, CALA claims that average tariffs have been eroded by 40% over two years in dollar terms, due to growing competition from non-CALA members. Nevertheless, "807" cargo prices have not fallen significantly. Shippers apparently set prices in part in relation to their conception of customers' capacity to pay, conceived in relation to the value of the product. This could only continue with some degree of (implicit or explicit) collusion among shippers. CALA explains the high relative cost of shipping between Puerto Cortés and Miami, compared with the trans-Pacific routes, by the size of ships and the related scale economies.

There is little argument about the quality of facilities at Puerto Cortés. The water is deep, the wharves are good, the bay is secure, the port is not congested and there are

adequate numbers of cranes and other necessary handling equipment - though the maintenance of the latter leaves something to be desired. On the down side, according to shippers, there is a strong union, which helps to keep costs high, and the speed of loading and unloading is not as fast as it might be. Shippers argue for the privatization of the loading process and of the billing and administration side of the National Port Authority.

Road infrastructure in the EPZ area

With the completion of a new network establishing four lane dual carriageways from Villanueva to San Pedro Sula, from San Pedro Sula to Puerto Cortés and from San Pedro Sula to El Progreso, the road problem will have been resolved.

CHAPTER 4 - LABOR MARKET SERVICES

Training services and the EPZ sector

41% of EPZ owners and users said there was a shortage of technicians and qualified supervisors. FIDE officials said that the shortage of qualified mechanics was the single most important labor bottleneck. Five respondents also said there was a shortage of machine operatives. Four said they thought that active piracy of trained labor had already become a problem. It is clear that the training of the EPZ labor force at all levels, but especially for technicians and supervisors, is an important factor affecting the sector's future potential.

There are two important Honduran institutions involved in industrial training: the state Instituto Nacional de Formación Profesional (INFOP), and the private Centro Asesor para el Desarrollo de Recursos Humanos (CADERH). The Programa de Asignaciones Familiares (PRAF) has a training program for women.

CADERH, which was formed in 1984 with USAID support, has led the way in providing training for the "maquila" sector. It has created a highly acclaimed program geared to overall support in the administration of textile confection plants, developed with the help of the specialist US company, Kurt Salmon, using USAID funds, which had trained 5,161 workers up to the start of October 1992. CADERH offers a six month program to train operatives and instructors, in the ratio 10 to one. Time is split roughly 80-20 between the shop floor and the classroom, underlining the emphasis on hands-on training. It uses the Advanced Analytical Method of Training (AAMT), which has been standard in the USA since the second world war. The program has trained around 6,000 workers to date.

USAID was considering a new program with CADERH for 1994/5 which would provide funds for CADERH to establish expertise in other areas, using the same sort of methodology as it applied in its work with Salmons in the textile confection field. INFOP could also be a beneficiary of this program, as could the private university, UNITEC.

Apart from its support to the maquila sector's training needs through CADERH, there is separate USAID program can fund up to 30% of the training costs of firms establishing in Honduras. CADERH has coordinated with FIDE to identify appropriate firms to receive support from the program. The central criteria is to target companies whose location in Honduras might represent a breakthrough in some part of the export processing market. Hanes, Choloma was given support as a market leader in apparel.

INFOP has done very little to date for maquila sector training, but is now establishing a school in cutting and sewing machine operation in San Pedro Sula, where supervisors, mechanics and high productivity operatives will be trained. The school, which will begin work at the start of 1993, will be able to receive two groups of 25 students at a time, and plans to run 2 month courses. It expects to train 240 people a year - a rather small number compared with the present and probable future scale of the sector's training needs. A serious problem faced by INFOP is the low level of salaries it pays its staff. It will find it impossible to hold on to staff really equipped to train effectively in the EPZ sector if it can pay them only L.2,000 a month. A move to a more flexible, labor market related salary system in the Institute would require a major shift from the traditional culture of the organization.

In 1991, PRAF began a pilot training program for women, intended to give them a way out of permanent dependence on social compensation programs. In Villanueva, there is a PRAF training school in cutting and sewing in Villanueva. The municipality has provided the physical space and coordinates the project. There were initially 135 women on the 4 month course, and 74 finished.

Workplace nurseries and the EPZs

We found no workplace preschool childcare facilities in EPZ companies. However, interest in this type of facility should grow in proportion to the difficulty of attracting and retaining labor. In Costa Rica, where the EPZ sector has confronted labor supply tensions for some three years in the central metropolitan area around San José, new EPZ developments have begun to include childcare provision as part of the package offered to client firms - for example, at the Metropolitan Free Zone.

As we reported above, over half the EPZ's female workforce are mothers, and over half the mothers are single parents. This suggests that workplace childcare might help to attract labor. Managers at Hanes Choloma reported recently that in 1991 they had a turnover of 32%, and attributed most of this to the problems of childcare. USAID did a pilot project for a workplace nursery project in San Pedro Sula in a textile plant at Parque Integrado No. 2 in Barrio Cabañas, run by the Kattán family, in the 1980s. The project used a modified "Montessori" methodology, and was considered successful by program officers. Unfortunately, there was no further funding after the pilot was completed.

Nevertheless, follow up studies on the children who passed through the school also demonstrated that their primary school performance was significantly better than other children's. This suggests that properly organized workplace nurseries might at once help ease labor market tensions in the EPZs, and make a real long term contribution to Honduras' human resource development. We would therefore recommend that development agencies consider the possibility of funding this type of initiative.

Worker transport and the EPZs

65% of EPZ workers travel to work by bus, while a further 30% travel by foot. The quality of bus services is therefore an important factor in the efficiency of the sector, affecting the workers' reliable arrival at work on time and also determining the effective recruiting range. Few believe that bus services are adequate, and four of the seven parks have a bus service of their own to overcome deficiencies in the public service.

Four companies operate interurban services on the highway to the north of San Pedro Sula. DGT considers that there is an insufficient service on this corridor, and has given permits to six private bus owners to work on contract to companies in the area requiring worker transport. The capacity shortage is concentrated in the morning and evening "rush hours"; the general problem is to tackle peak hour shortages without unduly increasing unused off peak capacity. The obvious way of doing this is to have a marginal cost pricing system which offers reduced off peak rates in order to reduce peak hour demand. This would require a radical change in industrial organization - including ticketing.

Rail services for worker transport

Passenger transport is a near-insignificant part of the existing business of the Ferrocarril Nacional. It produces revenues of L.25,000 a month in the Sula Valley sector- just 4.7% of total income. Notwithstanding this dismal scenario, there is a growing consensus in the EPZ sector that the railway system might be the answer to the area's worker transportation needs. The system runs close to all the major industrial parks, and it requires little imagination to see that it could be transformed into a regional metro which would render the whole of the triangle Choloma-Villanueva-El Progreso a single travel to work area. Short of that, the potential may exist for a north-south shuttle service between San Pedro Sula and Choloma, and San Pedro Sula and Villanueva, respectively.

During 1992, there have been exploratory discussions along these lines between the Ferrocarril and the CCIC. The proposal would involve the construction of a second line from San Pedro Sula to Choloma to allow two way traffic, and the purchase or leasing of suitable passenger transport units. The project is worthy of more detailed study, for various reasons: first, because present demand need not be restricted to EPZ workers; second, because potential demand will certainly grow in the future. ZIP Búfalo alone estimates that up to 6,000 workers from the park (60% of the projected total employment there) would use a train service; third, because there are positive externalities (social

benefits) to be had by shifting from polluting buses to electric trains, which would justify an element of public subsidy. We therefore recommend that a feasibility study be done on the establishment of a modern passenger transport system using the railway network.

Social security, workers' rights and unionization in the EPZs

- Social security

There are different social security regimes in the EPZs, depending in part on where they are located. In Villanueva, firms must enlist in the "short term risk" system covering illness and maternity. In Choloma, IHSS short term risk cover is available but not obligatory; firms can limit cover to "long term" risk (retirement, invalidity and death), which is much cheaper. In La Lima, short term cover is not available.

In addition, all the EPZs have the option of entering the IHSS' Company Medical System ("SME"), which gives short term cover, but on the basis of a workplace clinic. This functions in ZIP Choloma and ZIP San Miguel; it is IHSS policy to establish the SME in all the EPZs. ZIP Búfalo and ZIP Continental plan to introduce SME; INHDELVA is considering it. Where SME is operating, the rate of referrals to hospital is reckoned by the IHSS to be as low as three percent of cases seen by the workplace doctor. The percentage of worker absence for sickness is also well below IHSS norms: between five and seven percent, compared with over 10% for the IHSS as a whole.

- Family planning programs and the EPZs

There are two agencies active in family planning in the EPZ sector: the Asociación Hondureña de Planificación Familiar, ASHONPLAFA, and the IHSS. ASHONPLAFA begun EPZ oriented work in 1990, and presently has contraceptive distribution posts staffed by nurses in three EPZ factories: Monty and Hanes in ZIP Choloma and MAINTA (Osh Kosh B'Gosh) in INHDELVA.

The IHSS also supplies contraceptives (free) in its factory clinics, and runs a family planning education program in the EPZs under the umbrella of the SME. These programs have a health risk slant, and aim in particular to reduce the under 21 fertility rate. The justification for channeling IHSS resources into family planning is clear, in terms of reduced costs. The Mexican Social Security Institute (IMSS) estimates that every dollar spent on family planning generates \$14.50 in savings on services to pregnant women.

There is a need for the IHSS and ASHONPLAFA to agree a division of labor on family planning in the EPZs. The two clear areas of work are the medical prescription and provision of contraceptives, and educational programs designed to increase demand for the former.

- Minimum wages and workers' rights

There is no evidence of employer evasion either of the minimum wage or of regulations on standard working hours and holidays in the EPZ sector. Many factories have shut-downs for holiday time. A study by the Ministry of Labor in April 1992 found that the EPZ employers pay at or above the minimum. Average earnings in the EPZ sector are considerably above the statutory minimum. Most companies operate bonus systems which top up the basic wage, or use piecework systems. However, the minimum wage operates as a floor to the wage structure, and increases lead to "cost push", which could deflect marginal investors away from Honduras.

Whatever the importance of the minimum wage in pushing up wages, there are also signs of excess demand for trained labor. In the absence of any collective agreement among firms either to share training costs or not to "pirate" trained workers from one another, there is inevitably a danger of companies trying to "free ride" on the back of neighboring companies' training efforts. However, labor turnover rates are diverse: 50% a year in ZIP Choloma and over 100% in ZIP Continental. This suggests that companies can retain the workers they have trained if they follow appropriate personnel policies. The high generally level of labor turnover in the EPZs to date is almost certainly related to the newness of the sector. We would expect it to fall as companies establish settled, trained workforces and develop personnel policies appropriate to a situation where the costs of losing trained workers are high.

- Treatment of workers

In our survey of EPZ users, we found more concern about the institutional procedures of the labor market than we did about the cost of labor. However, officials in the Labor Ministry in San Pedro Sula did not give us the impression that they were gunning for the EPZ employers. They had investigated some ten worker complaints in EPZ firms in 1992 - which is hardly suggestive of a major problem, given the scale of employment in the sector. The Labor Ministry officials said the EPZ sector was not noticeably different from other employers in its treatment of workers. However, they believed that there was some problem with cultural differences between Asian employers and Honduran workers.

- Unionization

The Honduran Labor Code specifies that wherever a group of 30 workers wishes to form a union, the company must recognize their organization. The code has been criticized for not relating the minimum number to the size of the firm. In fact, there is to date a very low incidence of unionization in the EPZs. This is hardly surprising, given the recent establishment of the factories. We found only one plant

in our sample with a union, WARNACO in ZIP Villanueva, and in this case, the company had itself promoted the formation of the union in order to establish a stable institutional framework for labor relations. WARNACO's plant in the older state run Puerto Cortés Free Zone (which is outside the scope of the present study) is also unionized - in common with most plants in that zone.

As reported above, we found that many EPZ owners and companies are strongly opposed to unionization. This is confirmed by a Labor Ministry report, which stated that some EPZ firms would pull out immediately if a union were established, while 80% said they would only accept one if 100% of workers voted in a union ballot (which is not what the Labor Code requires). However, it is also clear that this does not arise from a desire to evade legal norms on terms and conditions of employment. We found no evidence of EPZ employer evasion of either the minimum wage or of labor market regulations related to working hours, holidays, social security, etc.

Rather, nervousness about unionization is related to a fear on the part of some EPZ owners and employers that factories would lose flexibility in their production processes if they had collective agreements. The maquila industry is very competitive, and firms need to be able to meet contract deadlines without the risk that production may be disrupted. As a result, a willingness to work overtime at short notice is an important factor in worker selection. As we saw above, there is a very high willingness to work more hours among the EPZ workforce.

Nevertheless, Honduran law makes compulsory overtime working illegal, and some companies fear that a union might use this to achieve very high overtime rates, using the threat of delaying completion of contracts. More generally, they fear that the combination of tight delivery deadlines with effective shop-floor worker organization adds up to a vulnerable negotiating position for the company. Other employers who were concerned about unions mentioned the fear their company might become entangled in protracted meetings and negotiations involving the Labor Ministry and regulated by the Labor Code, wasting valuable executive time.

In practice, employers who wish to prevent unionization can often do so by the simple expedient of dismissing the workers concerned and paying them their legally mandated severance pay ("prestaciones laborales"). While Honduran law makes it illegal to fire a worker for organizing or belonging to a trade union, any worker who accepts severance pay on leaving a job (whatever the reason for leaving) has no further legal claim against the company. Legally, the acceptance of severance pay means the labor contract has been severed by mutual agreement. It is quite normal for Honduran workers who might have a good legal claim against an ex-employer to accept their severance pay and call it a day. Often, a Labor Ministry inspector would witness the agreement and help to

calculate the amounts due (which depend on the length of employment). This is true in all sectors, not just the EPZs.

Labor Ministry officials in San Pedro Sula told us that they had received only one contested formal proposal to establish a union in the EPZ sector: at Best Form in ZIP Choloma, in 1991. On that occasion, the organizers left, accepting their severance pay. However, the Labor Ministry in Tegucigalpa reported that Monty in ZIP Choloma had also fired a group of workers who proposed to form a union; it did not say whether severance pay had been paid. It concluded that "this is perhaps the most sensitive issue in the maquila industries".

CHAPTER 5 - COMMUNITY INFRASTRUCTURES IN THE EPZ AREAS

According to data on indicators of relative poverty prepared by SECPLAN, the three municipalities where the EPZs are based all feature in the top 20 municipalities in the country (out of 292). La Lima is the most prosperous municipality; Choloma is 12th; and Villanueva 19th. Nevertheless, as we saw above, the inadequacy of social conditions is a concern of many EPZ users and owners.

In Choloma, the water supply for the López Arellano colony to the south of the city is very problematic, and has given rise to political conflicts between the local "patronato" and the municipality. The sewage system of Choloma is being improved: over L.2 mn has been invested in changing pipes and constructing new collectors. But all the sewage collected by the system is emitted untreated into the swamp lands to the east of the city. Likewise, the untreated sewage of the López Arellano colony finds its way into the Laguna El Carmen to the east.

In Villanueva, the mayor expressed concern that the sinking of new wells in the proximity of the city by ZIP Villanueva could reduce the available supply for the municipal water system.

The sewage system in the city area is undergoing a major upgrade. As we reported in section 3.3 above, the unauthorized connection of ZIP Villanueva to the system has been a source of conflict.

As befits the country's most prosperous municipality, La Lima has a much better general situation for both water and sewage collection than either Choloma or Villanueva. However, none of the systems treats sewage before discharging it into the local river system.

Housing

We encountered some ambivalence about FOSovi in our discussions with the CCIC and its members. On the one hand, industrialists whose operations are located outside the EPZs apparently felt that it was inequitable that EPZ clients should be exempt from the

payroll tax. On the other hand, there was clearly widespread skepticism about the relevance of FOSovi to the sector's housing problems.

FOSovi has been criticized as an initiative primarily motivated by the construction industry to finance the supply of housing, and focussed on the building process itself. This contrasts with strategies based on the provision of building lots with basic services installed, which leave the construction to the owners once the lot has been purchased. Such a model is FOVIPO - a joint private sector-public sector housing initiative set up in 1989 by the municipality of San Pedro Sula together with La Metropolitana savings and loans association. By the end of 1992, FOVIPO will have completed 3,500 lots.

Three EPZs have plans for housing developments aimed at their workforces: ZIP Continental, ZIP San Miguel, and (possibly) ZIP Búfalo. However, only ZIP Continental has made concrete progress to date on worker housing. It has a 30 manzana/800 lot urbanization carried out by La Metropolitana, adjacent to ZIP Continental in La Lima. 400 lots were awaiting only electricity for completion in June 1992.

The ICMA study of Choloma published in October 1991 says simply that "the housing deficit is striking and evident." The major problem with tackling this deficit is the very high cost of land in the area, due to the impact of the EPZ development.

In Villanueva, the municipality is attempting to negotiate with the Compañía Azucarera Hondureña the return of 30 manzanas for a housing project. Banco Sogerín plans to urbanize 180 lots in the eastern zone of the city, adjacent to ZIP Villanueva. Unimproved land prices are around L.10 per V², but go as high as L.50 opposite the ZIP. The local authority sets a minimum standard of 400 V² per lot, which has been an obstacle for some urban developers.

Education

Primary enrollment in Choloma rose 11.2% in the three year period 1988-91, which is the main period of growth of EPZ employment. Enrollment rose less in La Lima (4.4%) and Villanueva (4.2%), where EPZ jobs grew much less in this period. This suggests that the offer of work in the EPZs might have increased the matriculation rate in Choloma, as women need to free themselves of childcare responsibilities to be able to work.

However, higher matriculation rates may also be related to the offer of government bonds for children of female heads of families who are in primary education. And there has been very marked growth in enrollment over the period 1986-92 in both Villanueva (up 22%) and Choloma (up 30%), suggesting that longer term trends may be at work.

In February 1992, the director of primary education for the Cortés region reported that primary enrollment in the department had risen seven per cent in a year. He attributed this to migration linked to the EPZs. Although we think increased enrollment rates (caused by

the factors mentioned above), rather than immigration to the Department, are likely to explain most of the rise to date, the basic point that EPZ development is likely to add to education demand in the region is surely right.

Health

Choloma has four MSP rural health centers (CESARES) and two health centers with doctors (CESAMOS). They are reported to be very stretched by the present level of demand. Villanueva has one CESAMO and 4 private clinics, plus 5 CESARES. La Lima has only one CESAMO. However, the Tela Railroad Company has a private hospital in the town for its workforce, with 300 beds. In Villanueva, the services of the MSP and the IHSS have been unified into an articulated system which aims to avoid duplication of services and to economize effectively on resources.

Social compensation programs and the EPZ areas

The Mother Head of Family is active in Cortés, benefitting 8,861 mothers of 12,352 children in the first quarter of 1992. However, the program has an eligibility test of L.300 maximum income, which would automatically exclude any woman working in the EPZs. This is not an ideal system, as it will tend to reduce labor supply, both to the EPZs and to other jobs of all types paying L.300 or more.

EPZs and the local authorities

The local authorities are responsible for regulating community development and for providing directly many of the basic services needed by both industry and the population. EPZ development brings increased responsibilities for the municipalities, which are disproportionate to the new revenue received from the sector. This is due in part to tax exemptions offered to the EPZs. The local authorities are generally accepted to be overstretched. We recommend that the Honduran state assume the fiscal cost of the local authority tax exemptions given to the EPZs, in order to facilitate the provision of adequate communal infrastructure in the EPZ areas.

We estimate the potential value of local property tax exemptions for the EPZs at approximately L.430,000, and the present value of corporate local turnover tax exemption at roughly L.85,000. These are considerable sums compared with municipal budgets.

Given the stresses placed on the local authorities' services by the EPZs' development, it is questionable in principle whether the authorities should be asked to absorb the cost of this subsidy. It should be registered as a central government fiscal expense, with the funds transferred to the local authority concerned. Otherwise, the inevitable result will be that the supposedly subsidized services tend to deteriorate or disappear, as the municipalities will not have sufficient income to fund them.

We also identified two issues in relation to planning control and environmental protection. First (as we mentioned on page 11 above), there remains a major gap between the letter of the law and the practice on the ground in relation to land use planning and environmental norms. Second, the new proposal for a Sula Valley Authority has once more clouded the scope of municipal authority.

Summary indicators of EPZ impact, at June 1992

A. EPZ EMPLOYMENT AND EARNINGS

Source:

<u>1 Total employment, by municipality and EPZ</u>		
La Lima:		<u>1,500</u>
	ZIP Continental	1,500
Villanueva:		<u>1,330</u>
	ZIP Villanueva	210
	ZIP Búfalo	1,120
Choloma:		<u>14,700</u>
	INHDELVA	2,500
	ZIP Choloma	6,500
	Parque Galaxy	1,700
	CHIP	3,800
	ZIP San Miguel	<u>200</u>
Total:		<u>17,530</u>

Interviews
with
EPZ owners

<u>2 Employment structure in the EPZs</u>
Men 16% Women 84%
Under 31 90%
Basic labor 80%
Intermediate labor 18%
Managerial labor 2%

Workforce
survey

<u>3 Average monthly earnings of EPZ workers compared with averages in surrounding communities</u>			
	<u>EPZ</u>	<u>Av. Chol.</u>	<u>Av. V/nueva</u>
Total:	L.670	614	624
Men:	L.786	686	657
Women:	L.648	525	543

Workforce &
Community
surveys

<u>4 Average household incomes for households with and without EPZ workers present</u>	
With EPZ worker:	L.1,305
Without EPZ worker:	L. 964

ditto

/continued
Key indicators/ continued

Source:

5 IHSS cover of EPZ workers (percentages)

Sistema Médico de Empresa	38%
Enfermedad y Maternidad	8%
Invalidez, Viejez y Muerte	54%

Interviews
with
EPZ owners

Indicator:

B. SOCIAL CONDITIONS IN EPZ AREAS

1 Average household size

Choloma: 5.6 Villanueva: 5.3

Community
survey

2 Indicators of social needs

	Chol.V/nueva	survey
a. Population not living in individ.house/apartment	8%	12%
b. Households without:		
piped water	8.5%	5.7%
electricity	6.4%	10%
flushing toilet	47%	86%
connexion to sewer	53%	91%
c. Proportion of average total spending used for food	60%	70%

Community
survey

/continued
Key indicators/ continued

Source:

3. <u>Wealth indicators</u>				
a. Assets:				
% of householdst ¹				
with:	Chol	V/N	EPZ	Non-EPZ
sewing machine	34	27	28	33
stove	63	46	57	58
push bike	42	25	43	34
fridge	27	21	24	26
TV	71	64	74	67
b. Savings				
% of h/holds with any savings:	Chol	V/N		
		14		11
Av. savings (L.) of h/holds with savings:		1,365		1,740
c. Education				
% of popln aged 10 + with:	Chol	V/N		
-No education		15		13
-Primary only		67		55
-Secondary		18		28
-Higher		1		3½

ditto

Indicator:

C. LABOR MARKET INDICATORS

1 <u>Participation and unemployment rates</u>		
	Chol	V/N
<u>Participation</u>		
Men	74	67
Women	48	33
<u>Unemployment</u>		
Men	22	19
Women	25	40
2 <u>Migration</u>		
Proportion of EPZ workforce who migrated to work in EPZ: 20%		
3 <u>Previous occupation of EPZ workers</u>		
Unemployed:	46.5%	
Employed:	53.5%	

Community survey

Workforce survey

Workforce survey

Chol = all households in Choloma sample
V/N = all in Villanueva sample
EPZ = all h/holds with an EPZ worker member
Non EPZ = all h/holds with no EPZ worker member

D. FAMILY PLANNING INDICATORS

Both surveys

	Chol	V/N	EPZ Workforce
Proportion of sexually active women who plan:	31%	41%	53%

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PRICE WATERHOUSE

**USAID HONDURAS CONTRACT
522-9106-C-00-2023-00**

OCTOBER 1992

PRICE WATERHOUSE

USAID HONDURAS CONTRACT 522-9106-C-00-2023-00

OCTOBER 1992

**BASELINE STUDY OF POPULATION AFFECTED BY
EXPORT PROCESSING ZONES**

FINAL REPORT

PRICE WATERHOUSE

USAID HONDURAS CONTRACT 522-9106-C-00-2023-00

OCTOBER 1992

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PART ONE

THE GROWTH OF THE EPZS IN THE SULA VALLEY

CHAPTER 1 - INTRODUCTION

This study deals with the impact of Export Processing Zones (EPZs) on socio-economic conditions in the Sula Valley, and attempts to identify problem areas for public services and economic infrastructures related to the growth of the EPZs.

The study, which was carried out during the first half of 1992, is divided into two main sections. The first is an empirical study of the worker population in the EPZs of Choloma and Villanueva, and of the surrounding communities. The aim of this section is to establish "baseline" data against which to measure the continuing impact of the growth of EPZs over the coming years. We conducted two major surveys: of a sample of EPZ workers, and of a sample of households in the urban areas of the municipalities of Choloma and Villanueva close to the EPZs.

We present the results of these surveys in Part Two of the present report, alongside official data which allow for comparison between the populations we studied and the national population or relevant sub-categories. We also comment on similarities and differences with the worker population in the Mexican EPZs. We recommend a system to update the information presented in future.

The Part Three is concerned with public services and economic infrastructures in the areas of influence of the EPZs. We present the results of a survey of EPZ owners and users which identifies possible problem areas, and then we make a "Cook's Tour" of the different services, giving up to date data on the present state of the service and on existing plans for future development, commenting briefly on the extent to which each service appears to be coping adequately with the challenges posed by the rapid changes in the regional economy.

To set the scene, in chapter two we describe the growth of EPZs in the Sula Valley and the projections for future growth.

CHAPTER 2 - THE GROWTH OF EPZS IN THE SULA VALLEY

The mushrooming growth of employment in private sector EPZs is one of the success stories of Honduran economic policy in recent years. The legislative basis was provided by the US government's Caribbean Basin Recovery Act of 1983 and by reforms to Honduran legislation under the Azcona administration (1986-90).¹ The economic structural adjustment (ESA) policies of the Callejas administration (1990-94) further boosted the EPZs by reducing dollar labor costs and sending positive signals to potential investors.

As a result, Honduras is now firmly on the map for "maquila" investments by developed country firms seeking to reduce costs by transferring offshore their more labor intensive operations. The government hopes this will generate a large number of semi-skilled jobs, helping to absorb un- and under-employed workers and to bolster incomes in poor urban households. In the medium and long term, it hopes that success in relatively low-skill and labor intensive export operations will give way to more sophisticated forms of production, with higher local value added and greater technology transfer.

Table 1 charts the growth of investment in the construction of EPZs, which totalled L.122.5 mn in the three years 1989-91, with a further L.78 mn in the pipeline. The park developers are Honduran corporate groups or families, who have channeled resources generated in other activities into this new area.² However, there has also

¹ There are two pieces of legislation relevant to export processing zones in Honduras. While there are some differences in the rules attached to these different pieces of legislation, each provides for the establishment of privately owned and run export processing zones, and for the purposes of the present study they are sufficiently similar to be treated as a single animal, referred to by the term "EPZs". The first is the Free Zone legislation which was passed in the 1970s to regulate the state-run Puerto Cortés Free Zone, but was extended in the mid 1980s to provide for individual factories and parks to be established in designated cities on and near the coast by private operators. Three of the EPZs in the Choloma area are operated under the Free Zone law: CHIP Choloma, INHDELVA, and Parque Industrial Galaxy. The second piece of legislation is the 1987 law, Degree 37-87, providing explicitly for privately run "Zonas Industriales de Procesamiento" (ZIPs). There were five ZIPs operating in the first half of 1991: Choloma, Búfalo, Continental, Villanueva and San Miguel. The state owned Free Zone at Puerto Cortés, which has been full for some years, does not fall within the ambit of the present study. Similarly, there has been rapid growth of export production outside industrial parks under the Drawback (Importación Temporal) legislation, which was also revised under the Azcona administration in Decree 186-86 - but this sector also falls outside the scope of the present study.

² All but two of the EPZs are 100% Honduran owned, the exceptions being Parque Industrial Galaxy, which is Korean, and ZIP San Miguel, which is 75% Honduran and 25% US owned.

been financial support from development agencies. A USAID-funded trust fund, managed by the Fundación Hondureña para Desarrollo de Exportaciones (FIDE) and channeled through the Banco Atlántida, has made loans to three different parks, totalling over L.15 mn; the Interamerican Development Bank's commercial lending arm, the Interamerican Investment Corporation, IIC, has agreed loans to two parks, totalling over L.19 mn.; and the US government's Overseas Private Investment Corporation has agreed a loan worth almost L.20 mn to ZIP San Miguel. Table 1.2 summarizes information on the structure of finance for a number of the EPZs, gleaned during interviews for the present study.

All of the EPZs are located in the Sula Valley on the north coast, where they are grouped in three clusters around the San Pedro Sula, which is Honduras' second city and main industrial center, with an estimated population of 353,000 in 1992, growing at 5.3% a year³ (see map). There are nearby further population concentrations in El Progreso, La Lima and Choloma. The Sula Valley is served by Honduras' main port, Puerto Cortés, which is in turn close to the Gulf Coast and Florida ports of the USA - the main market for EPZ production, and has plentiful flat greenfield sites suitable for industrial development.

The biggest EPZ cluster is sited in the municipality of Choloma to the north of San Pedro Sula, on the road to Puerto Cortés. Here are sited CHIP Choloma, ZIP Choloma, INHDELVA, ZIP San Miguel and Parque Industrial Galaxy. The second cluster is to the south of San Pedro Sula in the municipality of Villanueva: ZIPs Búfalo and Villanueva, with a further ZIP planned for the near future (ZIP Buenavista). The third cluster is at La Lima on the south east side of the city, on the road to El Progreso, where ZIP Continental is sited.

Table 2 shows the number of firms operating in each EPZ at March 1992, along with the number of jobs created, according to data provided by FIDE, the Honduran investment promotion organization most closely linked to the EPZ development program. The total number of firms was 38, which had invested over \$30 mn, generating 15,620 direct jobs, all of them established since the start of 1989.⁴ Apart from ZIP Choloma, CHIP Choloma, and Parque Industrial Galaxy, all the EPZs listed are still well below full capacity. In addition, ZIP Choloma plans new initiatives in both Choloma and Villanueva.

³ We have projected the 1992 population from the 1988 census figure of 287,350 by extrapolating the sectoral growth rates experienced by the four quarters of the city during the period between 1978 (San Pedro Sula municipal census) and 1988 (national census), using data provided by the Unidad de Investigación y Estadística Social, Municipalidad de San Pedro Sula.

⁴ The figure for total investment by companies operating in the EPZs is calculated from FIDE data for investment promotion results to May 1992, and understates the real total since it comprehends only 25 of the 38 companies established in EPZs.

The factory area in use in EPZs in March 1992 represented only 26% of the total planned space at that date. So there is medium-term potential for a cuadrupling of EPZ employment in the Sula Valley, to around 60,000 direct jobs, and the number of direct jobs created by the EPZs could easily double over the next two to three years. The rapidity of EPZ employment growth is underlined by data collected for the present study in June 1992, which give a total of 17,500 - already 12% up on the total reported by FIDE in March⁵.

This exponential growth is redolent of the experience of other countries beginning on the EPZ road in the past. For example, after the Border Industrialization Program began in 1965, Mexico saw a leap from 3,000 to 14,000 jobs in its maquila sector between 1965 and 1968. By 1990, the sector would employ 434,000 (Angeles Villarreal, 1991: 5). This type of sustained growth has also been noted in Guatemala in the 1980s, where employment in maquila operations leapt from 500 to 45,000 in the period 1980-1990 (Walker, 1991: 16) and had reached 80,000 by 1992 (Economist Intelligence Unit, 1992 ii: 16). These experiences suggest that maquila industry need not necessarily be only a temporary source of employment opportunities.

However, it is also clear from the experience of other countries that EPZ development typically brings with it new problems and tensions, and there remains much legitimate scope for debate over the capacity of EPZ employment to be the trigger for a qualitative leap in economic development. There is an extensive literature on the Mexican and Asiatic experiences, largely concerned with balancing the benefits of this type of job creation against the costs of the process.

One recurrent theme is that of the transmission mechanisms between the growth of the EPZ sector and the rest of the economy. Direct labor demand, especially in the early stages when the apparel and electronic assembly industries tend to dominate, is mainly for low-skilled workers and is heavily concentrated among young women, many entering the labor market for the first time. For some, this is a positive factor, representing a breakthrough for a group previously excluded from the development

⁵ The breakdown was as follows (rounded to nearest 10):

La Lima:		<u>1,500</u>
	ZIP Continental	1,500
Villanueva:		<u>1,330</u>
	ZIP Villanueva	210
	ZIP Búfalo	1,120
Choloma:		<u>14,700</u>
	INHDELVA	2,500
	ZIP Choloma	6,500
	Parque Galaxy	1,700
	CHIP	3,800
	ZIP San Miguel	<u>200</u>
Total:		17,530

process; for others, it reflects the marginal character of the relationship between the EPZ sector and the mainstream economy.

To date, there have been no data available on the impact of EPZ development in Honduras on household incomes and expenditures, and on other indicators of the quality of life. Part Two of the present study aims to fill this gap. We report data on the socioeconomic characteristics of the EPZ workforce in Honduras and of the households and communities to which they belong, and to recommend a series of indicators which will allow us to measure the continuing impact of EPZ development over the coming years. This part of our study also analyses the available evidence on the labor market impact of EPZ development and the associated problem of migratory flows.

A second general area of concern is the sustainability of the EPZ development in relation to the provision of social and economic infrastructures. Mexico has managed to sustain the total of maquila employment - but it is clear that there are considerable social and environmental tensions in the border area as the result of inadequate infrastructures (Angeles Villarreal: 1991, i). Other countries have experienced contractions of the "footloose" EPZ sector following infrastructure breakdown (eg. the Dominican Republic over the last three years). Part Three of the present study looks at the existing social and economic infrastructures of the Sula Valley area and at plans for their development over the immediate future, in an effort to identify obstacles to continued success of the EPZ sector.

Are the electricity, road, public transport, telephone and other economic infrastructures adequate to the projected needs of the EPZ sector over the coming years? Are national training organizations capable of responding to EPZ needs? How will the public authorities and private sector providers respond to the housing and other social infrastructure needs which arise as a result of the changes in population patterns induced by EPZ development? Finally, we review the norms which regulate EPZ employment in Honduras and the norms for environmental control of the sector, and comment on the extent to which there appear to be potential problems in these areas.

In summary, the purpose of the present study is to make a start on the provision of data related to EPZ development which point up areas which may require policy initiatives, in order that Honduras should not experience some of the difficulties which have characterized the Mexican border area and other maquila centers in recent years.

TABLE 1.1 - INVESTMENT IN DEVELOPMENT OF EPZS, 1989-91
L. MILLIONS

EPZ:	1989	1990	1991	Total	Pipeline
* CHIP Choloma	-	8.0	1.5	9.5	-
ZIP Villanueva	-	6.0	11.0	17.0	12.0
ZIP Búfalo	-	7.0	4.6	11.6	-
ZIP Choloma	9.0	21.0	10.6	40.6	40.0/1
* INHDELVA	-	9.0	12.0	21.0	19.0
ZIP Continental	-	9.0	2.0	11.0	-
ZIP San Miguel	-	-	2.8	2.8	7.0
* Parque Galaxy	-	-	9.0	9.0	-
TOTAL	9.0	60.0	53.5	122.5	78.0

* = Free Zone extension

/1 The pipeline figure for ZIP Choloma includes L.30 mn for a new park in Villanueva, ZIP Buenavista.

Source: FIDE, March 1992

TABLE 1.2 - SOURCES OF FINANCE FOR EPZ DEVELOPMENT
L. MILLIONS

EPZ:	Total	Investment to May 1992:					IADB
		cap-	Own Hond. ital	AID/ bankloan	OPIC FIDE	IIC/ /USA	
CHIP Choloma	12.5		7.0		5.5		
ZIP Búfalo	11.0		5.5	5.5			[5.5] /1
ZIP Choloma	49.3		15.0	3.0	7.6		13.5 /2
ZIP Contintl.	21.0		18.9		2.1		

ZIP San Miguel	40.0		16.0	4.0		19.8	/3

/1 The figure in brackets is for a programmed loan and is not part of the total to date of L.11mn in the first column.

/2 Figures for June 1992. The breakdown leaves out L.6.4 mn of long term capital and L.3.8 mn of short term working capital from miscellaneous sources, which are included in the total. The L.3 mn shown as a Honduran bankloan are short term funds provided from the saving and loan El Futuro via the Bolsa de Valores.

/3 The figures for ZIP San Miguel are for total planned investment. Investment to May 1992 was just L.5mn.

Source: Interviews by the author, May-August 1992

TABLE 1.3 - NUMBER OF FIRMS AND JOBS BY PARK, MARCH 1992

EPZ:	Firms	Jobs	No. factory shells:				% of tot planned space now in use
			(a)	(b)	(c)	(d)	
			(see key below)				
CHIP Choloma	6	3,794	6	6	0	0	100%
ZIP Villanueva	1	160	3	3	3	6	25%
ZIP Búfalo	2	770	2	2	2	31	5%
ZIP Choloma	11	5,365	21	21	0	23	27% /1
INHDELVA	6	2,242	6	7	0	21	30%
ZIP Continental	5	1,451	5	5	3	4	39%
ZIP San Miguel	1	110	1	1	2	18	5%
Parque Galaxy	5	1,728	5	5	0	0	100%
TOTAL	38	15,620	49	50	10	103	26% /2

(a) No of shells presently in use

(b) No of shells competed

(c) No. of new shells under construction

(d) No. of additional shells planned at March 1992. NB: many parks have space for many more shells than are indicated here.

Notes:

/1 Fourteen of the 23 future planned factory shells for ZIP Choloma are to be located in the company's new park at Villanueva, ZIP Buenavista. The others are planned in an extension to the existing Choloma site (4 shells) and a new Choloma site, ZIPTEX (5 shells).

/2 Total area let at March 1992 was 1.45 million sq. feet and total planned area was 5.5 million sq. feet. However, the area already let represented 84% of the area built or actually under construction. In general, EPZ owners are reluctant to build shells far ahead of demand.

Source: Reworked from data provided by FIDE, dated 27/3/92.

PART TWO

SOCIO-ECONOMIC CHARACTERISTICS OF THE EPZ WORKFORCE, THEIR FAMILIES AND COMMUNITIES

CHAPTER 1 - SURVEY METHODOLOGY

a) The workforce survey

The first survey undertaken was a workplace interview of 200 EPZ workers in the EPZs of ZIP Choloma (98 interviews), INHDELVA (50 interviews) and ZIP Búfalo (52 interviews), collecting data on the following points (Annex 1 contains the questionnaire form):

- i. Basic personal information (age, sex, marital status, family relations)
- ii. Education
- iii. Individual's labor market history, including motives for working in EPZ and migration to work in EPZ.
- iv. Income and spending
- v. Access to and use of health services
- vi. Family planning behavior

The minimum sample in each EPZ was set at 50 in order to give a basis for reliable statistical inference about individual EPZs. The larger sample of 98 taken from ZIP Choloma reflects its larger total employment at the time the interviews were underway in February 1992 (see Table 1.3 above). Interviewees were chosen as a random sample from the payroll lists of firms within each EPZ. We had hoped to interview in CHIP Choloma and ZIP Continental in La Lima, but were unable to gain access. Annex 2 gives a breakdown of interviews by firm and EPZ.

The sample should be a reliable representation of the EPZ workforce in Choloma and Búfalo. It is possible that there may be some differences between this population and that of the La Lima EPZ workforce, as the local labor market in La Lima is somewhat different from those of Búfalo and Choloma due to the prevalence of banana industry employment in La Lima. We present data on the workforce composition at ZIP Continental in La Lima provided by the EPZ management which suggest there are some differences, but they are of degree rather than of quality.⁶

⁶ A possible limitation with the data is that we interviewed with management's blessing during work time, so that answers to questions on worker opinions could be distorted by workers expressing attitudes expected to be agreeable to management. However, most of our data are for hard information, and are unlikely to be affected by this problem.

b) The community survey - aims

We undertook a survey of 300 households in the urban areas of Choloma and Villanueva, collecting data on the following points (see Annex 3 for the interview form used):

Household information:

- i. Basic conditions in the household
- ii. The head of household's opinions on public services
- iii. The household's entitlements to IHSS cover
- iv. Tenure
- v. Artefacts
- vi. Household spending
- vii. Household savings
- viii. The household's community integration
- ix. Head of household's opinions on EPZ development
- x. Individuals in the household by age, sex and civil status

Information on individuals of five and over in household:

- i. Migratory history
- ii. Educational profile
- iii. (for 10 and over) Economic activity
- iv. (for women aged 15-44) Family planning activity

The purpose of this survey was twofold. Firstly, we sought to establish an accurate picture of socioeconomic conditions in each of the communities. Choloma has already been significantly affected by EPZ development; Villanueva will be affected over the coming years, but is as yet relatively untouched. The data collected will serve as a "baseline" for measuring the continuing impact of the EPZs in these communities.

Secondly, we sought to identify households where EPZ workers live within our household sample, in order to give more information on the EPZ workers themselves, and to act as a check on data collected in the workplace survey. There turned out to be 101 EPZ workers within the household sample.

c) The community survey - design

Our survey was designed to produce data consistent with those presented in the *Encuesta Permanente de Hogares con Propósitos Múltiples* of the *Dirección General de Estadísticos y Censos* (EPHPM-DGEC). This survey is carried out annually, but is not sufficiently disaggregated to use for studying the impact of the EPZs. It provides only

aggregate indicators (national totals, broken down into rural and urban sub totals). Municipal-level data are given only for of Tegucigalpa and San Pedro Sula⁷.

The national-urban and San Pedro Sula indicators in the EPMPM-DGEC will provide a useful point of comparison for the data on the EPZ areas produced in the present exercise and in future follow-ups. Our data are also comparable in many respects with national census data from 1988, allowing us to comment on the extent to which the communities have changed since that date.

d) The community survey - sampling method

The two universes of interest are the urban communities of Choloma (including the main city and the López Arellano area) and Villanueva. We had resources available for 300 household surveys, and divided them between Choloma (200) and Villanueva (100). The sample for Choloma was larger, in part because the universe there is much larger: in the 1988 census, the urban population of Villanueva was 11,410 and that of Choloma, 37,194. Extrapolating the intercensal growth rates for the 1974-88 period of 4.2% and 10.5% respectively, projected urban populations for 1992 are 16,962 (Villanueva) and 54,456 (Choloma)⁸.

Secondly, we felt a-priori that the Choloma community was likely to exhibit more diversity than that of Villanueva, due to more rapid recent growth and, in particular, higher immigration rates over the last twenty years (the López Arellano area did not exist 20 years ago). We therefore expected to need a bigger sample to get reliable indicators. The selection of the sample in each of the universes was based on DGEC methodology, as follows:

1. Each universe was divided into geographical segments following the political division of "barrios", and each segment into manzanas.
2. For reasons of survey economy, we set the average number of interviews per segment at 10. Together with the (pre-determined) sample sizes of 200 and 100, this meant that we would visit 20 segments in Choloma and 10 in Villanueva.
3. The segments were selected randomly (in the sense that each segment had the same chance of being chosen). The sample for each universe was then divided among the chosen segments in proportion to the number of dwellings in the segment relative to the other chosen segments.

⁷ The total EPMPM-DGEC sample includes only 208 households from medium sized cities in the northern region.

⁸ Full details on the 1988 census results for the populations of Choloma and Villanueva and population growth projections are presented in Chapter 3 below.

4. Within each chosen segment we chose (again at random) manzanas (local clusters), in which we interviewed every household, until the required number of households for the segment had been reached. A full list of the barrios (segments), manzanas and households chosen is provided in Annex 4. The total number of surveys successfully processed was 202 for Choloma and 88 for Villanueva.

e) Presentation of results

Chapter 2 concentrates on the basic characteristics of the EPZ workers themselves, as established in the workplace survey, with back-up data from the community survey and other sources where appropriate. Chapter three describes the basic social characteristics of the two communities of Choloma and Villanueva. Chapter four looks at population structure and migration in Choloma and Villanueva, drawing on evidence from both our surveys and from the 1988 census, and discusses the present and likely future impact of EPZ growth on the local labor market and on migratory flows. Chapter five looks at family planning among EPZ workers, and in the surrounding communities. In Chapter 6 we recommend a series of key indicators and a follow-up methodology.

CHAPTER 2 - BASIC CHARACTERISTICS OF THE EPZ WORKFORCE⁹

Age, sex and family structure

Women are the overwhelming majority of the EPZ workforce, accounting for 84% of our workforce sample of 198 valid interviews (Table 2.1). Women are even more heavily represented amongst the sub-set of machine operators, which constitutes 75% of the total sample: 87% of machine operators in the sample were women (Table 2.2). Some 35% of all the workers are under 21 years old; a further 39% are between 21 and 25. Women under 31 years old constituted 75% of the whole sample. We found only 6 women over 35: just 3.6% of all the women employed. The age structure of the male labor force was similar, with 78% under 26. There were no men over 35, and there were no under 15s of either sex (Table 2.1).¹⁰

TABLE 2.1 EPZ WORKFORCE BY AGE AND SEX - WHOLE SAMPLE

Age:	Women	Men	Total	Percent
15 to 20	58	11	69	34.8
21 to 25	64	14	78	39.4
26 to 30	27	6	33	16.7
31 to 35	11	1	12	6.1
36 to 40	5		5	2.5
41 to 45	1		1	0.5
Total:	166	32	198	100
Percent:	84	16	100	

Source: Workforce survey

Data for ZIP Continental supplied by the management there (not tabulated) confirm a similar pattern, although the relative weight of women workers and workers under 21 was somewhat greater than for our sample from Choloma and Búfalo. Of 1,500

⁹ This section is based principally on the workforce survey. We also have data on the EPZ workers encountered in the households visited in our community survey. Unlike the workforce survey, this survey was not designed to be representative of the EPZ workforce. Nevertheless, we report the pertinent data as footnotes throughout the section to provide an additional source of information.

¹⁰ The sex structure of the 110 EPZ workers we found in the community sample was 64% women and 36% men; 45% of these workers were under 20 and 90% were under 30; 91% of the women were under 30. We identified 8 workers under 15 years old: 6 women and 2 men. The Honduran Labor code allows under 15s to work only with a permit from the Ministry of labor, which will normally be given only if there is a training or apprenticeship element.

workers, 93% were women. Some 58% of all workers were under 21 and 29% were between 21 and 25.

TABLE 2.2 EPZ EMPLOYEES SAMPLE BY JOB TYPE

Job type:	Women		Men		Total No.	Column %
	No.	%	No.	%		
Basic labor	<u>132</u>	<u>86</u>	<u>21</u>	<u>14</u>	<u>153</u>	<u>78</u>
-Machine operator	127	87	19	13	146	75
-Cloth cutter	4	100	0	0	4	2
-Line feeder/packer	1	33	2	67	3	1½
Intermediate labor	<u>28</u>	<u>74</u>	<u>8</u>	<u>26</u>	<u>36</u>	<u>18</u>
-Secretary/admin.	1	50	1	50	2	1
-Supervisor/instructor	15	83	3	17	18	9
-Quality control	12	92	1	8	13	6½
-Mechanics	0	0	3	100	3	1½
Managerial labor	<u>1</u>	<u>33</u>	<u>2</u>	<u>67</u>	<u>3</u>	<u>1½</u>
-Accountant	0	0	1	100	1	½
-Manager	1	50	1	50	2	1
Not defined	<u>2</u>		<u>1</u>		<u>3</u>	<u>1½</u>
TOTAL	163	84%	32	16%	195	100%

Source: Workforce survey

TABLE 2.3 MARITAL STATUS OF EPZ WORKERS

	Women		Men	
	No.	%	No.	%
Single	110	66	25	78
Divorced	4	2.4		
Separated	1	0.6		
Widowed	1	0.6		
Married	31	19	2	6.3
Common law spouse	19	11	5	15.6
Total	166	100	32	100

Source: Workforce survey

Most women in the EPZ workforce are single; only 30% are either married or have a common law spouse. And if we exclude those whose declared partner is not living in the same household, the figure falls to 25%. Of the men, only 22% have a wife or common law spouse. These low ratios are apparently the result of the age structure of the workforce; among the women aged 26 or more in the sample, the proportion with spouses rises to 43%.¹¹

TABLE 2.4 NUMBER OF CHILDREN OF EPZ WORKERS

Number of children:	Women		Men		Total	
	No.	%	No.	%	No.	%
0	80	48	22	67	102	51.5
1	34	20.5	5	15.6	39	19.7
2	24	14.5	3	9.4	27	13.6
3	14	8.4	2	6.3	16	8.0
4	9	5.4			9	4.5
5	3	1.8			3	1.5
6	1	0.6			1	0.5
7	1	0.6			1	0.5
Total	166	100	32	100	198	100

Source: Workforce Survey

Forty eight percent of the women and 51.5% of the men in our sample had no children; 20.5% of the women had one child, 14.5% had two children and 16.8% had three or more children (Table 2.4). That roughly half the women employed should be mothers goes some way to undermine the allegation made by some commentators that EPZ jobs are strictly limited to childless women. But our data also call into question the opposite idea that a majority of the women working in the EPZs are single mothers, as claimed, for instance, by Mr. Victor Delon of Hanes Choloma in a recent magazine article (CADERH, 1992: 6). Just 28% of the women in our sample were single mothers (55% of those who have children). There is a significant incidence of children separated from their mother: 19% of female workers' children do not live with their mother.¹²

¹¹ The age, sex and marital status profile of our sample conforms closely to the norms observed in Mexico, where almost 85% of maquila workers are women aged between 17 and 25, 70% of whom are single (Fernández Kelly, 1978: 214).

¹² This figure rises to 30% for women workers under 21 - though the inferential value of this latter conclusion is limited by the fact that the total number of children of women under 21 was only 10.

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There is a clear correlation between age range and fertility. Of the women under 21, only 17% had children, and none had more than one child, so that the average number of children per worker in this age range was just 0.17. This contrasts sharply with the 21-25 age range, where 56% of women had children and the average number of children per worker was 0.9. Employers wanting to avoid employing women with childcare responsibilities could therefore do so by recruiting under 21s, but, as we saw above, with the possible exception of ZIP Continental, the EPZs apparently do not do this. It is a moot point whether this shows that they are no so anxious to exclude women with children as is sometimes alleged, or simply reflects an insufficient supply of under 21s.

That over half of those who are mothers should be single parents underscores the instability of family relations in the marginal urban communities which are the main source of EPZ labor. Further evidence of family instability is to be found in the rather high proportion of women whose children had more than one father: of 52 women with more than one child, 20 (38%) said there was more than one father.

The women in our sample had a slightly higher average number of dependents than the men. This is mainly explained by the fact that the women tend to start families at a younger age. These dependents did not in general depend exclusively on the EPZ worker.

TABLE 2.5 DEPENDENTS OF EPZ WORKERS

	Women	Men	Total	95% confidence int. for total:
Av. no. of dependents:				
Children	1.5	1.25	1.44	± 16%
Adults	1.0	1.0	1.0	± 17%
Total	2.5	2.21	2.43	± 13%
Degrees of freedom:	166	31	198	

Source: Workforce survey

TABLE 2.6 ZIP WORKERS' RELATIONSHIP TO THEIR HEAD OF HOUSEHOLD

		Head of household is your:						
		Self	Partner	Father	Mother	Brother	Sister	Other
Women								
No.	31	33	48	32	6	1	14	
%	18.5	19.7	28.7	19.2	3.6	0.6	8.4	
Men								
No.	8	1	11	6	1	0	4	
%	25	3	34	19	3	0	12.5	
All								
No.	39	34	59	38	7	1	18	
%	19.6	17	29.6	19.0	3.5	0.5	9.0	

Source: Workforce survey

The impression that most EPZ workers are junior members of their households is reinforced by the data for headship of households (Table 2.6). Only 19.6% of respondents identified themselves as head of their own household.

Women respondents were somewhat less likely to be the head of their household than their male colleagues: 18.5%, compared with 25% for the men. Very nearly 50% of the workers live with their parents as subordinates. While almost 20% of the women identified their partner as head of their household, only one man did so.

Education

Our data on the education of the EPZ workforce confirm that basic literacy and primary education is a standard requirement for EPZ employment (Table 2.7). Only three of our sample said they did not know how to read and write, and only one worker said they had never attended school.¹³ The majority (52%) had only had primary education, but 41% had some level of secondary schooling. Only 4.5% had higher education, of which just over half (2.5%) had attended university. Over half the workers have some sort of technical education prior to working in the EPZ. Forty five percent of the women had been trained as a seamstress. A relatively large number of workers (20%) was attending some sort of education or training program at the time of the interview.¹⁴

Stability of EPZ employment

Only 25% of our sample had been working more than a year for the company which presently employed them; 46.5% had been working for 6 months or less for the company, and fully 73% had been there less than a year (Table 2.8 a). However, these data are not necessarily indicative of high instability of employment in the EPZ factories. The recent establishment of the factories makes it very difficult to draw conclusions about normal turnover rates from the data in our survey. One would normally expect an above-average turnover in the setting-up period, before the workforce stabilizes. (See Part 3, section 4.4 iii for more discussion on this point).

Data for the populations of Choloma and Villanueva as a whole from our community survey show that in Choloma, where the EPZs are concentrated, the workforce has on average been recruited more recently than in Villanueva: 58% have been in their job under a year, compared with 35% (Table 2.8 b).

¹³ However, answers to questions on education may have been distorted by the workers' fear that they could lose their job if they admitted to a lower level of education than they knew was required for the job.

¹⁴ Of the EPZ workers in the community survey, 3% were illiterate and 3% did not have at least primary education. 32% had some secondary education - although half of these had completed 2 years or less. 25% had some technical education - 85% of them in sewing and related skills.

TABLE 2.7 EDUCATION OF EPZ WORKFORCE

	♀	♂	Tot.	Percent
<u>Cannot read and write:</u>	3	0	3	1½

<u>Level of schooling:</u>				
-No schooling	1	0	1	½
-Primary	93	11	104	52
-Secondary	61	20	81	41
-Higher no univ	4	0	4	2
-University	4	1	5	2½
TOTAL	167	32	199	100
<u>Technical training:</u>				
Mechanic	0	1	1	½
Soldering	0	1	1	½
Seamstress	76	0	76	38
Beauty parlor	4	0	4	2
Plumbing	0	2	2	1
Electricity	0	4	4	2
Other	16	8	24	12
None	71	16	87	44
TOTAL	167	32	199	100
<u>Attending an educational center:</u>	33	7	40	20

Source: Workforce survey

TABLE 2.8 LENGTH OF TIME IN COMPANY

(a) EPZ Workforce:

	<u>Women</u>	<u>Men</u>	<u>Total</u>	<u>Percent</u>
Under 3 months	19	10	29	14.5
4-6 months	60	4	64	32
7-9 months	27	6	33	16.5
10-12 months	14	6	20	10
13-18 months	16	5	21	10.5
19-24 months	27	1	28	14
25-36 months	1	0	1	0.5
over 3 years	<u>2</u>	<u>0</u>	<u>1</u>	<u>0.5</u>
TOTAL	166	32	198	100

Source: Workforce survey

(b) Choloma and Villanueva communities

	<u>Cholon</u>	<u>Villanueva</u>	<u>Total</u>
	<u>%</u>	<u>%</u>	<u>%</u>
< 1 year	58	35	51
1 - 2 years	11	14	12
2 - 3 years	6	10	7
3 - 5 years	6	11	7
5 - 10 years	9	15	10
> 10 years	11	16	12
(No. of cases)	(339)	(135)	(474)

Source: Community survey

Travel to work

Approximately half the EPZ workers are within half an hour of their workplace, and almost all the rest are within an hour. Only three means of transport are widely used: walking, buses and bicycles. The bus is the most important means of travel, accounting for 65% of all workers, while a further 30% walk and 5% use cycles. Half the workforce pays L.2 or more a day to travel to and from work.¹⁵

¹⁵ For the EPZ workers in the community survey, we found a very similar pattern. 97% were within 30 minutes of work. 44% travel by foot, 43% by bus and 10% by bicycle. None reported paying over L.3 a day to travel to work.

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TABLE 2.9 TRAVEL TO WORK TIMES OF EPZ EMPLOYEES

	<u>Women</u>	<u>Men</u>	<u>All</u>	<u>Percent</u>
Under 15 mins	22	9	31	16
15-29 mins	48	12	60	30
30-44 mins	48	2	50	25
45-59 mins	42	6	48	24
1 hr or more	7	3	10	5
TOTALS	167	32	199	100

TABLE 2.10 MEANS OF TRAVEL TO WORK OF EPZ EMPLOYEES

	<u>Women</u>	<u>Men</u>	<u>All</u>	<u>Percent</u>
Bus	111	19	130	65
Bicycle	5	4	9	4.5
Foot	51	9	60	30
TOTAL	167	32	199	100

TABLE 2.11 COST OF TRANSPORT FOR EPZ WORKERS

<u>Daily cost:</u>	<u>Number</u>	<u>Percent</u>
Under 2 lempiras	97	49
2-5 lempiras	63	32
Over 5 lempiras	39	20

Working hours

The overwhelming majority of EPZ workers have a normal work week of between 40 and 50 hours per week; a small proportion works over 50 hours (Table 2.12). The standard legal working week is 44 hours. Only 2.5% of workers said they had rest breaks of under 45 minutes a day; 16% had between 45 minutes and an hour; 80% had between an hour and 90 minutes and 2% said they had over 90 minutes.

The pattern is similar among the EPZ workers in the community survey (data not tabulated): 2% work under 40 hours, 74% work between 40 and 50 hours a week, 8% work 50-59 hours and 16% work 60 hours or more. Average working weeks (with 95% confidence intervals as a percentage of each average in brackets) were 48 hours ($\pm 5\%$) for men, 48½ hours ($\pm 6\%$) for women and 48.3 hours ($\pm 4\%$) for the total. Forty four percent of these workers said they would like to work longer hours, and of these, 96% already worked 40 hours or more, reflecting a great willingness to work overtime.

TABLE 2.12 NORMAL HOURS OF WORK OF EPZ EMPLOYEES

	<u>All workers</u>		<u>Women</u>		<u>Men</u>	
	Number	Percent	Number	Percent	Number	Percent
40-44 hours	137	68.8	119	71	18	56
45-49	43	21.6	33	20	10	31
50-54	6	3.0	4	2	2	6
55-59	4	2.0	3	2	1	3
>59	9	4.5	8	2	1	3
TOTAL	199	100.0	167	100	32	100

Childcare

Family members were the main source of childcare support for workers with children under 13 years old. Of 85 workers with children under 13, 8 said their partner cared for the children while they worked, while 61 said another family member took charge. Only ten paid for a childminder. Only two thought there was no need to arrange childcare.

TABLE 2.13 CHILDCARE ARRANGEMENTS FOR UNDER 13s

(For workers with children under 13)

	<u>Number</u>	<u>Percent</u>
<u>Cared for by:</u>		
Partner	8	9
Other family member	61	72
Paid childminder	10	12
Other	4	5
No need for care	2	2
TOTAL	85	100

Earnings of EPZ workers

The average earnings for EPZ workers in our workforce survey was L.670.6 per month; for women the figure was L.647.9 and for men, L.786.2 (Table 2.14). These averages stand well above the statutory minimum wage of L.501 per month which was in force at the time of our survey. We found relatively few workers who had earned less than the statutory minimum in the last pay period: 13½ per cent of the sample.

Inspection of the individual cases shows that most of these can be ascribed to working short weeks.¹⁶ Table 2.15 gives a breakdown of earnings by job type.

Importance of EPZ workers' income

Only 31% of the men and 26% of the women in our sample were the only earner in their household (Table 2.16). Thirty nine percent of EPZ worker's households have two incomes and 34% have three or more incomes. However, the EPZ worker's income is likely to be relatively important to the household. Uniformly among men and women and skilled and unskilled earners, some 55% of EPZ workers are their family's biggest earner. Few EPZ workers have second incomes from any source. They are well above the L.300 per month threshold which limits eligibility for the government's bond program in Cortés (see Part 3 section 5.5 below).

TABLE 2.14 EARNINGS OF EPZ WORKERS IN LAST PAY PERIOD/1

	<u>Women</u>	<u>Men</u>	<u>All</u>	<u>Percent</u>
<u>Monthly earnings:</u>				
400 or less	7	0	7	3.6
401-500	19	0	19	9.9
501-600	47	7	54	28.1
601-700	43	6	49	25.5
701-800	22	4	26	13.5
801-1000	18	6	24	12.5
1001-1200	6	1	7	3.6
1201-1500	1	2	3	1.6
1501-2000	0	3	3	1.6
TOTAL:	163	29	192	100
<u>Average monthly earnings:</u>				
	<u>Mean</u>	<u>Std.Dev.</u>	<u>Cases</u>	<u>95% conf int</u>
Total sample:	670.6	240.5	195	± 5%
Men:	786.2	443.5	32	± 20%
Women:	647.9	168.8	163	± 4%

/1 Where interview data was weekly, we converted it to monthly data using the formula: monthly income = weekly income x 30/7 This follows the Honduran norm that weekly pay is calculated on a seven day basis, and monthly on a 30 day basis. See Part 3 section 4.4 iii for more detail on this point.

Source: Workforce survey, February 1992

¹⁶ The EPZ workers in the community survey had lower average earnings than those in the workforce survey, and showed less male-female disparity: total L.535 (± 7%), men L.532 (± 14%) and women L.536 (± 8%). However, the workforce sample is a better representation of the total workforce.

TABLE 2.15 EARNINGS OF EPZ WORKERS BY JOB CATEGORY/1

	Percentage in each range:		
	<u>Basic labor</u>	<u>Intermediate</u>	<u>Managerial</u>
<u>Monthly earnings:</u>			
L. 400 or less	5	0	0
401-500	12	3	0
501-600	29	25	0
601-700	29	14	0
701-800	12	22	0
801-1000	11	19	0
1001-1200	2	11	0
1201-1500	1	3	33
1501-2000	0	3	67
TOTAL	100	100	100
No. of cases:	150	36	3
Average earnings:	L.635.7	L.795.9	L.1,666.6
Standard deviation:	155.6	258.4	305.5
95% confidence int:	± 4%	± 11%	± 46%

/1 See Table 2.2 above for a definition of the job categories

Source: Workforce survey

TABLE 2.16 NUMBER OF EARNERS IN EPZ WORKERS' HOUSEHOLDS

	Number of earners in the household:											
	1		2		3		4		5		6	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Women	43	26	65	39	38	23	14	8.4	1	0.6	5	3.0
Men	10	31	12	38	5	16	1	3.1	4	12.5	0	0
All	53	27	77	39	43	22	15	7.5	5	2.5	5	2.5

Source: Workforce survey

TABLE 2.17 IMPORTANCE OF EPZ WORKER'S INCOME TO HOUSEHOLD

Number whose wage is the main of household income:					
	<u>Women</u>	<u>Men</u>	<u>All</u>	<u>Percent</u>	
Unskilled workers	78	7	85	57%	[tot unskilled=149]
Skilled workers	17	10	27	54%	[tot skilled= 50]
TOTAL	95	17	112	56%	[tot sample=199]
Percent	57%	53%			

Source: Workforce survey

TABLE 2.18 OTHER SOURCES OF INCOME OF EPZ WORKERS

<u>Source of income:</u>	<u>Number who mentioned source:</u>			
	Women	Men	All	Percent of workforce
Maintenance payment from father of child	12	3	15	7.5
Government bonds	0	1	1	0.5
Childrens' income	0	1	1	0.5
Other work by self	6	3	9	4.5
Other source	9	2	11	5.5

Source: Workforce survey

Further evidence on the impact of EPZ earnings on household incomes comes from our community survey, where we identified 110 EPZ workers in total, living in 70 different households (Table 2.19). There were 54 households with one EPZ worker, 12 with two, eight with three, and two with four EPZ workers. Average incomes of households with EPZ workers are 35% higher than those with none. This difference is statistically significant at the 95% confidence level. While only 3% of EPZ households had an income under L.401, 14.5% of non-EPZ households fell in this category. 63% of EPZ households had monthly income of over L.801, compared with 46% of non EPZ households.

Social security and medical services

The workforce survey asked workers if they were inscribed in the Instituto Hondureño de Seguridad Social (IHSS); however, their answers (Table 2.19) may say more about their awareness than about the real situation. In our interviews with employers we found none whose workers were not inscribed in the IHSS. ZIP Choloma had the Sistema Médico de Empresa (SME), or company medical system, in place at the time of our fieldwork. At ZIP Búfalo, there was off-site IHSS medical cover. Employers at INHDELVA uniformly subscribed to the minimum "Invalidéz, Vejez y Muerte" (IVM) - Disability, Old Age and Death - regime. The perception of 70% INHDELVA workers that they are not inscribed in IHSS is therefore incorrect. However, it is true that they do not have IHSS medical cover.¹⁷ The companies in INHDELVA (as other parks without IHSS medical cover) contract private doctors. Employees' answers show they were not always easily able to discern the legal basis for the medical provision they receive.

¹⁷ We discuss the social security regime in more detail in Part 3, section 4.4.

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Workers use company medical services frequently: 82 (65% of those who answered the question) had used them at least once over the last 6 months (Table 2.21). However, there is zero use by spouses and remarkably little use by children, in spite of the cover given by SME. Since over half the workers have at least one child, this suggests there may be some access problems.

Workers have a positive opinion of the workplace medical service. Under 4% said it was "bad" or "very bad"; 38% said it was good or very good; 57% thought it was "so-so" or had no opinion (data not tabulated). The overwhelming majority (70%) of workers said the workplace medical service was good value. However, of these, some 25% did not in fact have the IHSS' SME, so they were not paying anything for the service.

Social integration and organization of EPZ workers

The only type of social activity which is generalized among EPZ workers is religion, in which 61% claimed involvement. 22% were involved in sport and 7.5% in their local "patronato" (neighborhood committee). Party politics and trades unionism are apparently unimportant. However, the fact that we interviewed in the workplace could have distorted responses on trade unions.

TABLE 2.19 HOUSEHOLD INCOMES: EPZ WORKERS, NON EPZ WORKERS AND ALL HOUSEHOLDS

Household income last month, L.:	EPZ worker households	Non EPZ households	All Households
Under 100	0	2½	2
101-200	0	1	1
201-400	3	11	9
401-600	13	23	20
601-800	21	15	17
801-1200	23	22	22
1201-2000	26	17	19
Over 2000	14	8	10
Number of cases:	(70)	(158)	(228)
Average income L.	1,304	964	1,068
Standard deviation	778.5	675.6	935.1
95% confidence int.	± 14%	± 11%	± 11%

Note: household incomes are calculated as the sum of all individuals' incomes on which we have data. Where we have income data for no household member, the case is excluded. Where we have data on at least one member, the case is included, even if we lack data on other members. The household incomes for all the groups shown are therefore likely to be slightly underestimated. But this does not affect the comparison between the groups.

Source: Community survey

TABLE 2.20 EPZ WORKERS AND IHSS

	ZIP BUFALO		INHDELVA		ZIP CHOL.		TOTAL	
	No.	%	No.	%	No.	%	No.	%
Workers who answered "yes" to the question indicated:								
Inscribed in IHSS?	47	85	15	30	95	100	157	79
IHSS medical service available at work?	28	50	4	8	95	100	127	64

Source: Workforce survey

TABLE 2.21 USE OF WORKPLACE MEDICAL SERVICES

	Times used in last six months by:		
	Self	Spouse	Children
<u>All workers</u>			
None	45	0	115
1-4	72	0	9
5-9	9	0	3
10 or more	1	0	0
<u>Women</u>			
None	36	0	99
1-4	67	0	9
5-9	6	0	2
10 or more	1	0	0
<u>Men</u>			
None	9	0	16
1-4	5	0	0
5-9	3	0	1
10 or more	0	0	0

Source: Workforce survey

TABLE 2.22 SOCIAL INTEGRATION OF EPZ WORKERS

	Workers who were active or semi-active in each activity:			
	Women	Men	All	Percent
Sport	25	19	44	22
Political parties	4	2	6	3
Social clubs	7	2	9	4.5
Patronato	14	1	15	7.5
Church/religion	103	18	122	61
Trades union	0	0	0	0
Womens' group	7	0	9	4

Source: Workforce survey

CHAPTER 3 - SOCIOECONOMIC CONDITIONS IN CHOLOMA AND VILLANUEVA

The data presented in this chapter are drawn mainly from our community survey. We start by describing the sample population, and then we present data for general social and economic conditions of the households.

Household composition in Choloma and Villanueva

Our sample comprised 1,033 individuals in Choloma and 513 in Villanueva. Complete data on the age and sex structure of our sample population are given in Annex 5. To test the reliability of our sample as an indicator of the population universes, Table 3.1 compares the age composition of our sample with 1988 census data for the urban area of each municipality. The patterns are similar, indicating that the sample is probably reasonably representative of the population universe.¹⁸

TABLE 3.1 AGE STRUCTURES OF SAMPLE POPULATIONS, COMPARED WITH 1988 CENSUS DATA

	Percentages:			
	Choloma - Urban		Villanueva - Urban	
	Our sample	1988 census	Our sample	1988 census
Under 5	13	16	13	16
5-14	28	30	26	28
15-19	13	10	13	11
20-29	18	16	18	16
30-44	16	16	18	16
45-59	8	7	7	7½
60+	4	5	6	5

Sources: Annex 1, and 1988 census

Housing conditions

Table 3.2 shows the average number of persons per household according to our survey, and gives figures from the 1988 census for urban household density for comparison. In Choloma, we found an average of 5.6 people in each household, while in Villanueva, the figure was a little lower, at 5.3. The general similarity between the two sets of figures further reinforces our conclusion that our sample is fairly reliable. The

¹⁸ The only qualification is that the under fives are slightly under-represented in our sample, which in turn makes the relative shares of the other groups look a little too big. We compared the structure of the 5+ age groups and found an almost perfect match with the census figures.

higher household density in Choloma in 1992 compared with 1988 might be taken as evidence of growing housing shortage - though the difference from the 1988 figure is hardly greater than the confidence interval for the 1992 statistic.

TABLE 3.2 AVERAGE HOUSEHOLD SIZES IN SAMPLE POPULATION

	Our sample		1988 census	
	Choloma	V/nueva	Choloma Urban	V/nueva Urban
Persons/household (av.)	5.6	5.3	5.25	5.3
Standard deviation	2.2382	2.0774		
95% confidence interval	± 5%	± 8%		

Source: Community survey and 1988 census

The following tables show the type of housing used by the households in our sample, the materials used for construction and the availability of basic services. The great majority of households live in individual houses or apartments; just 8% in Choloma and 12% in Villanueva live in some sort of shared arrangement. In Choloma, more houses are brick-built than in Villanueva, and the latter has a correspondingly higher proportion of wooden buildings.

A high proportion in Villanueva are outright owners of their homes (73%, against 55% in Choloma). In Choloma, more people have a housing loan (12%) and more people rent their homes (25%, against 20% in Villanueva). Rents are somewhat higher in Choloma, at L.104 against L.87 a month - though the confidence intervals for the two averages overlap.

Water supply coverage is better in Villanueva - but a smaller proportion has a supply inside their house, rather than on the property. Electricity supply is good in both cities (over 90% coverage) but in neither does electricity figure among the main fuels used for cooking. In Choloma, bottled gas and kerosene predominate; in Villanueva, wood is the principal fuel.

Choloma has better sanitary facilities at the household level: 53% have flushing toilets, and 47% are connected to public sewers. In Villanueva, only 14% have flushing toilets and only 9% are connected to public sewers. Instead, latrines predominate.

The listing of household artefacts shows a similar pattern for the two cities, but Choloma generally has slightly higher proportions with each artefact, suggesting greater household wealth. However, it is not clear that this is related to EPZ earnings: the breakdown for households with EPZ workers compared with those without EPZ workers shows few marked differences, though the former are somewhat more likely to have push bikes and black and white TVs (Table 3.13).

TABLE 3.3 TYPE OF HOUSE

	<u>Choloma</u>		<u>Villanueva</u>	
	No.	%	No.	%
Indiv. house/apartment	185	92	77	88
"Rancho"	4	2	4	4.5
Room	9	4.5	3	3.4
TOTAL	202	100	88	100

TABLE 3.4 MATERIAL OF WALLS

	<u>Choloma</u>		<u>Villanueva</u>	
	No.	%	No.	%
Brick	156	77	48	55
Mud blocks ("adobe")	4	2	5	6
Wood	39	19	25	28
Cane/leaf ("bahareque")	1	0.5	3	3.4
Other	2	1	7	8
TOTAL	202	100	88	100

TABLE 3.5 HOUSING TENURE AND COST

	<u>Choloma</u>		<u>Villanueva</u>	
	No.	%	No.	%
Owner				
-Fully paid	112	55	64	73
-with mortgage/1	25	12	2	2.3
Renting/2	50	25	17	20
Occupying without payment	15	7	5	6
TOTAL	202	100	88	100

/1 Average monthly home loan repayment	L.65.6	L.104
No. of cases	25	2
95% confidence int.	± 36%	-
/2 Average monthly rent	L.104.1	L.86.9
No. of cases	49	17
95% confidence int.	± 19%	± 27%

TABLE 3.6 WATER SUPPLY

	<u>Choloma</u>		<u>Villanueva</u>	
	No.	%	No.	%
Piped water:				
-Public supply	171	85	83	94
-Private/collective	14	7		
Well	12	6	2	2.3
Other	5	2.5	3	3.4
TOTAL	202	100	88	100

TABLE 3.7 ORIGIN OF WATER

	<u>Choloma</u>		<u>Villanueva</u>	
	No.	%	No.	%
Within dwelling	92	45.5	20	22.7
Within property	96	47.5	62	70.5
Beyond property	14	7	4	4.5
No data			<u>2</u>	<u>2.3</u>
TOTAL	202	100	88	100

TABLE 3.8 ELECTRICITY SUPPLY

	<u>Choloma</u>		<u>Villanueva</u>	
	No.	%	No.	%
ENEE	185	92	79	90
Private-collective	3	1.5		
Private-individual	1	0.5		
No supply	<u>13</u>	<u>6.4</u>	<u>9</u>	<u>10</u>
TOTAL	202	100	88	100

TABLE 3.9 FUEL USED FOR COOKING

	<u>Choloma</u>		<u>Villanueva</u>	
	No.	%	No.	%
Electricity	14	7	6	7
Kerosene	91	45	26	30
Bottled gas	53	26	7	8
Wood	43	21	48	55
Other	<u>1</u>	<u>0.5</u>	<u>1</u>	<u>1</u>
TOTAL	202	100	88	100

TABLE 3.10 TYPE OF SANITARY FACILITY

	<u>Choloma</u>		<u>Villanueva</u>	
	No.	%	No.	%
Flushing toilet	107	53	12	14
Latrine	93	46	73	83
None	<u>2</u>	<u>1</u>	<u>3</u>	<u>3.4</u>
TOTAL	202	100	88	100
Individual	181	90	81	92
Collective	19	9	3	3.4
No data	<u>2</u>	<u>1</u>	<u>4</u>	<u>4.5</u>
TOTAL	202	100	88	100

TABLE 3.11 CONNEXION TO SEWAGE DISPOSAL

	<u>Choloma</u>		<u>Villanueva</u>	
	No.	%	No.	%
Public sewer pipe	94	47	8	9
Septic tank	51	25	34	39
Unsanitary sink	31	15	40	45
No data	<u>26</u>	<u>13</u>	<u>6</u>	<u>7</u>
TOTAL	202	100	88	100

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TABLE 3.12 HOUSEHOLD MEMBERS WITH IHSS COVER

<u>No. covered:</u>	<u>Choloma</u>		<u>Villanueva</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
0	116	58	57	65
1	42	21	12	14
2	19	9	14	16
3	14	7	4	4.5
4	3	1.5		
5	4	2	1	1.1
6	2	1		

TABLE 3.13 ARTEFACTS

	Percentage of households which has each item			
	<u>Choloma</u>	<u>V/nueva</u>	<u>EPZ h/hold</u>	<u>Non EPZ</u>
Sewing machine	34	27	28	33
Electric iron	71	63	70	68
Stove	63	46	57	58
Fridge	27	21	24	26
Bicycle	42	25	43	34
Motorcycle	6	6	7	6
Car (not work's)	5	2	1½	5
Washing machine	1	0	0	1
Phone	5	0	4	3
Sound system	38	27	31	36
B&W TV	48	46	54	45
Color TV	23	18	20	22
No of cases:	(202)	(88)	(74)	(216)

Source: Community survey

Opinions on public services and EPZs

Table 3.14 records the head of households' opinions about the state of the public services in their area, and Table 3.15 shows their priorities for action. In each case, water is number one priority, followed by street drains, sewers and street lighting. Electricity was regarded as easily the best of the services.

Residents have a very positive general opinion of the impact of the EPZs; in Choloma, 76% said it was positive or very positive, while in Villanueva the figure rises to 85% (Table 3.16). However, there is also a downside. Somewhat surprisingly, most though that prostitution would rise due to the EPZs, in spite of the increased employment for women. Most also expected pollution to worsen, although the industrial processes linked to the EPZs are not generally dirty ones. People also expected more crime and alcoholism.

TABLE 3.14 OPINIONS ON QUALITY OF BASIC SERVICES

Percentage of respondents with each opinion:
No service Bad/very bad Indifferent Good

	<u>No service</u>	<u>Bad/very bad</u>	<u>Indifferent</u>	<u>Good</u>
<u>Choloma</u>				
Water	7	31	34	28
Street drains	51	6	10	34
Sewers	53	4.5	7.5	36
Street lighting	29	9	11	50
Electricity	9	2	10	79.5
Phone	87	4	0.5	6.5
Pavements	87	6	4.5	2.5
Garbage disposal	32	19	22	27
Health center	19	9	15	42
Fam.planning clinic	33	4	8	21
<u>Villanueva</u>				
Water	6	18	31	45
Street drains	98	1	0	1
Sewers	99	0	1	0
Street lighting	26	8	18	48
Electricity	9	1	10	79
Phone	98	0	0	2
Pavements	99	0	0	1
Garbage disposal	72	4.5	3.5	19.5
Health center	28	3.5	7	56
Fam.planning clinic	70	0	0	7

Note: where the percentages do not add to 100, some households did not express a clear opinion.

Source: Community survey

TABLE 3.15 PRIORITIES FOR IMPROVEMENTS IN PUBLIC SERVICES

Respondents were asked their priorities for improvements in services. We have summed the responses into a single index, giving 4 points to priority one, down to 1 point for number 4. The resulting index numbers are expressed as percentages.

	<u>Choloma</u>	<u>Villanueva</u>
Water	42	50
Drains	20	19
Sewers	19	16
Street lights	14	15
Health Center	5	0

Source: Community survey

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TABLE 3.16 OPINIONS OF THE IMPACT OF THE EPZS

	<u>Choloma</u>	<u>Villanueva</u>
<u>Overall impact:</u>	8	8
Very bad	1/2	2
Bad	1	0
Indifferent	22	13
Good	24	22
Very good	52	63
<u>Employment:</u>		
Worse	5	2
Same	6	5
Better	86	91
<u>Crime:</u>		
Worse	54	38
Same	36	45
Better	8	12
<u>Alcoholism:</u>		
Worse	67	54
Same	24	30
Better	6	10
<u>Prostitution:</u>		
Worse	65	46
Same	24	40
Better	6	10
<u>Pollution:</u>		
Worse	44	41
Same	50	45
Better	3	5

Note: Where totals sum to under 100, some respondents expressed no opinion.

Source: Community survey

Personal and household incomes in Choloma and Villanueva

Average personal incomes (excluding those with no income) in Choloma are L.614 a month, and in Villanueva, L.624 (Table 3.17). Both figures are below the average for EPZ workers of L.671 reported in Chapter 2 above (Table 2.14). Average household incomes are L.1,025 in Choloma and L.931 in Villanueva (Table 3.18).

Spending patterns of EPZ communities and workers' households

Food is overwhelmingly the main item of expenditure in both the households of Choloma (60%) and Villanueva (70%) (Table 3.19) and in EPZ workers' weekly budgets (40%) (Table 3.20). Paying off debts is the second largest item in households in Choloma (10%) and Villanueva (8%); but for the EPZ workforce, transport is the second item (22%). The households' reported average expenditure is L.835 for Choloma and L.734 for Villanueva. Each of these totals is somewhat below the average household income figures reported above for the two cities. In contrast, EPZ

workers reported average weekly expenditure somewhat above the average weekly income of L.157, at L.189.¹⁹

The most interesting difference between household spending patterns where there is an EPZ worker, compared with households where there is none, is that the former are spending much more paying off debts (Table 3.19). This suggests that EPZ employment leads to increased borrowing, which becomes possible because the household's income has risen to finance it. If this is right, the initial impact of EPZ development could be to reduce net savings (total savings less total borrowings) in the affected communities.

However, the confidence intervals for all the expenditure data are rather wide. It is difficult to get accurate household expenditure data in a single interview, and the figures should be treated as no better than a very general indication of real spending patterns.

TABLE 3.17 PERSONAL INCOMES IN CHOLOMA AND VILLANUEVA

Income range:	Percentages:					
	Choloma			Villanueva		
	♂	♀	All	♂	♀	All
L.100 or less	2	4½	3	0	10	3
L.101-200	5	8	6	1½	0	1
L.201-400	18	13	16	18	17	18
L.401-600	38	50	44	47	41	43
L.601-800	16	17	17	20	13	18
L.801-1200	13	7	11	11	17	13
L.1201-2000	4	0	2	4	0	3
L.>2000	1½	0	1	2½	½	2
Average Income L.	686	525	614	657	543	624
Std Deviation	561	311	473	404	269	373
No. of cases	164	131	295	71	29	100
95% confidence int.	±12%	±10%	± 9%	±15%	±19%	±12%

Source: Community survey

¹⁹ The weekly income figure of L.189 is calculated from the monthly figure of L.671 reported in Table 2.14 above, using the formula: weekly = monthly x 7/30.

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TABLE 3.18 HOUSEHOLD INCOMES IN CHOLOMA AND VILLANUEVA

Household income last month, L.	Percentage of households	
	Choloma %	Villanueva %
Under 100	2	1½
101-200	½	1½
201-400	7	12
401-600	17	27
601-800	17	18
801-1200	24	18
1201-2000	22	13
Over 2000	11	9
Number of valid cases:	(161)	(67)
Average income L.	1,025	931
Standard deviation	828.6	627.3
95% confidence int.	±12.5%	±16%

Note: household incomes are calculated as the sum of all individuals' incomes on which we have data. Where we have income data for no household member, the case is excluded. Where we have data on at least one member, the case is included, even if we lack data on other members. The household incomes for all the groups shown are therefore likely to be slightly underestimated. But this does not affect the comparison between the groups.

Source: Community survey

Savings of the communities and of EPZ workers

Scarcely 15% of households in the Community survey reported any savings (Table 3.21). Average savings for all households in Choloma (including those which did not report savings) were a low L.199; for Villanueva, the figure is L.223. However, the few households which do save have significant amounts of financial assets: the 39 saver households in Choloma averaged L.1,365; the 10 in Villanueva, L.2,084.

A higher proportion of the respondents in the Workforce survey (50%) reported personal savings, and the savers averaged L.579 (Table 3.22). Bank deposits and savings and loan association accounts are the main types of asset held. Once again, the standard deviations of the statistics are rather high, and the confidence intervals for the reported averages are correspondingly wide.

Education of the workforce in Choloma and Villanueva

In Choloma, 17% of the over 10 age group is illiterate, compared with 15% in Villanueva (Table 3.23). The proportion of the population with no education of any type stood at 15% in Choloma and 13% in Villanueva. In both cases, the figure is well down on that given for the urban areas of the two municipalities in the 1988 census (21% and 26% respectively), suggesting that educational coverage is improving. In

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Choloma, the proportions who have finished primary education and started secondary education have apparently risen since 1988; in villanueva the most marked increase is in those who have started secondary education.

Our data for the proportion of the population between 5-29 involved in education correspond almost exactly with 1988 census data for Choloma (44%), but show a much larger proportion for Villanueva (53% against 40% in 1988) (Table 3.24). In both cities, the predominant technical education is sewing and related skills ("corte y confección). 10% of the over 10s in Choloma and 7% in Villanueva had been trained in this area (Table 3.25).

TABLE 3.19 HOUSEHOLD EXPENDITURE PATTERNS

Av. monthly spending	Choloma				Villanueva			
	L.	%	95%	CI	L.	%	95%	CI
<u>Whole sample</u>								
Food	503	60	±	9%	510	70	±	12%
Housing	30	4	±	27%	25	3	±	62%
Clothing	64	8	±	27%	28	4	±	59%
Water, electricity, phone	44	5	±	28%	26	3	±	25%
Transport	37	4	±	34%	35	5	±	36%
Education	34	4	±	30%	31	4	±	46%
Entertainment	11	1	±	52%	8	1	±	153%
Paying debts	85	10	±	60%	59	8	±	77%
Saving	27	3	±	71%	12	2	±	120%
Total	835	100			734	100		
<u>Households with and without EPZ workers</u>								
	<u>With EPZ worker</u>				<u>No EPZ worker</u>			
Food	535	60	±16%		495	63	± 8%	
Housing	29	3	±38%		28	3½	±33%	
Clothing	64	7	±18%		48	6	±28%	
Water, electricity, phone	31	3	±38%		41	5	±29%	
Transport	35	4	±44%		35	4½	±30%	
Education	29	3	±43%		34	4½	±31%	
Entertainment	8	1	±100%		11	1½	±62%	
Paying debts	123	14	±100%		66	8	±46%	
Saving	29	3	±100%		22	3	±80%	
Total	883	100			780	100		

Source: Community survey

TABLE 3.20 EPZ WORKERS' EXPENDITURE PATTERNS

<u>Average weekly spending</u>	Lempiras	%	Std. devn. (df=198)	95% conf. int. as % of average
Food	75.5	40	53.4	±10%
Transport	41.7	22	155.3	±54%
Housing	13.1	7	27.3	±29%
Education	12.5	7	73.1	±82%
Leisure/entertainment	11.5	6	23.6	±29%
Paying debts	19.2	10	46.0	±33%
Savings	13.5	7	26.4	±28%
TOTAL	189.3	100	218.6	±16%
Valid cases 193				

Source: Workforce survey

TABLE 3.21 AVERAGE STOCKS OF SAVINGS - COMMUNITY SAMPLE

(a) <u>For all households</u>	<u>Choloma</u>	<u>Villanueva</u>	<u>Total</u>
Average savings, L.	199	223	206
No. of cases	202	88	290
95% confidence int.	±95%	±56%	±50%
(b) <u>For households with savings</u>			
Average savings, L.	1,365	1,740	1,461
No of valid cases	29	10	39
95 % confidence int.	±48%	±87%	±40%

Source: Community survey

TABLE 3.22 SAVINGS STOCKS OF EPZ WORKERS WHO HAVE SAVINGS

<u>Amount of savings</u>	<u>Percent</u>
<u>Lempiras</u>	<u>of workers</u>
100 or less	18
101-500	53
501-1000	16
1001-1500	5
1501-2000	2
> 2000	6
<u>Average savings</u>	<u>Lempiras</u>
<u>by type of asset:</u>	
Cash	31
Bank account	240
Saving and Loan	302
Lent to friend	5
Other	1
TOTAL	579

Valid cases=99 (50% of the sample has no savings or gave no data)
 Std. deviation for total: 744.9; 95% confidence int. for total: ±25%

Source: Workforce survey

TABLE 3.23 EDUCATION OF POPULATION OF WORKING AGE

Number in each group, and percentage for total:

Age	Ilit.	<u>Highest level of education reached:</u>							
		A	B	C	D	E	F	G	H
CHOLOMA (Valid cases: 758)									
10-19	21	14	0	59	152	39	15	0	0
20-29	20	18	0	19	97	30	17	2	4
30-44	31	26	0	36	84	11	11	0	2
45-59	30	32	0	19	21	4	4	0	0
Over 59	25	25	0	9	8	0	0	0	0
TOTAL	127	115	0	142	362	84	47	2	6
Percent	17	15	0	19	48	11	6	0.2	0.8
1988 Census		21		21	43	8	7		1
VILLANUEVA (Valid cases: 378)									
10-19	8	7	0	21	60	32	11	0	1
20-29	11	10	0	7	27	19	21	4	3
30-44	12	9	0	21	36	10	10	1	3
45-49	11	9	0	13	9	0	3	0	0
OVER 59	15	15	0	7	7	0	2	0	0
TOTAL	57	50	0	69	139	61	47	5	7
Percent	15	13	0	18	37	16	12	1½	2
1988 Census		26		15	38	9	10		1

Legend:

Ilit. = Number in age range who cannot read and write

A = None/pre-primary

B = Literacy course

C = Primary 1-3 years

D = Primary 4-6 years

E = Secondary/Technical 1-3 years

F = Secondary/Technical 4-6 years

G = Superior 1-3 years

H = Superior 4-7 years

1988 Census = 1988 census figures for urban Choloma and Villanueva, for comparison

Source: Community Survey

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TABLE 3.24 PROPORTION OF POPULATION AGED 5-29 IN EDUCATION

Age:	Number and percent of each age range attending an educational course:					
	Choloma		Villanueva		Total	
	No.	%	No.	%	No.	%
5 - 9	94	69	59	86	153	75
10-14	116	78	53	80	169	79
15-19	35	27	29	44	64	33
20-29	18	10	15	17	33	12
Total	263	44	156	53	419	47
1988 census		44		40		
Pop. 5-29	602	100	292	100	894	100

Note: The percentages in each row show the number in education as a proportion of the total sample population for the respective age range (which is only shown directly for the total 5-29 range).

Source: Community survey

TABLE 3.25 TECHNICAL EDUCATION IN CHOLOMA AND VILLANUEVA

	Number and percent with each type of training:			
	Choloma		Villanueva	
	No.	%	No.	%
Sewing and similar	78	10	27	7
Tailors	7	1	3	1
Mechanics	13	2	11	3
Beauty	7	1	5	1
Building trades	21	3	15	4
Drivers	8	1	4	1
Others	46	6	21	5
Total	180	24	86	23
Valid cases	758	100	378	100

Note: All percentages are given as a proportion of valid cases

Source: Community survey

CHAPTER 4 - EPZ DEVELOPMENT, LABOR SUPPLY AND MIGRATION

This chapter presents data from our workforce and community surveys and from national statistical sources related to the impact of EPZ development to date on the local labor market and to the related question of migratory flows. The three general factors affecting labor supply to the EPZs are:

1. The size and rate of growth of the population
2. The labor market participation rate of the population
3. The limits to the travel to work areas imposed by the cost and speed of transport

We analyze these points in the following sections. To set the scene, we make population and workforce projections based on 1988 census data, which show that projected EPZ employment of 60,000 for the Sula Valley area as a whole is very large relative to the young female population, which will be expected to provide most of the workforce. We estimate the economically active female population aged 15-29 for the five municipalities of San Pedro Sula, Choloma, Villanueva, La Lima and El Progreso at a maximum of 53,000 in 1992.

However, evidence from our own workforce and community surveys on labor force participation and employment rates shows that in fact there is still considerable slack in local labor markets in the EPZ areas. Three factors appear to have been important in keeping labor supply for the EPZs ahead of demand to date:

1. Immigration has kept population growth high
2. Female participation rates have risen in Choloma and Villanueva
3. San Pedro Sula has acted as a labor reserve for the EPZs in Choloma and Búfalo

Finally, we look at previous employment and earnings of workers in the EPZs, to corroborate the hypothesis that the EPZs are likely to have caused some labor shortages in other sectors of the Sula Valley economy.

a) EPZ labor demand and the local labor supply

In Part 1 of the present study, we reported that total employment in EPZs around the Sula Valley at June 1991 was 17,500 (page 4 above). Our survey of the EPZ workforce in Choloma and Búfalo suggested that 84% of the workforce is female, and 90% is under 31 years old. Women under 31 make up 75% of the total workforce (Table 2.1 above). The data from ZIP Continental show 93% of their workforce is female and that 87% of all workers are under 26. It is therefore clear that, to date, EPZ demand for labor is heavily concentrated among young women.

This concentration corresponds neatly with the pattern of labor availability in the zone. Historically, many women have been economically inactive, due in part to the absence of work opportunities. This can be seen clearly in table 4.1, which presents an overview of the labor supply situation in the main Sula Valley municipalities, based on 1988 data.²⁰ Although the female population of working age is slightly larger than the male population, the female economically active populations (PEAs) of the valley average under a third of the male PEAs. In Choloma, in the age range 15-29, the male participation rate was 87% against a female rate of 29%. In Villanueva, the respective figures were 84% and 14%; in La Lima, 72% and 23%; and in El Progreso, 78% and 23% (Annex 6).

TABLE 4.1 POPULATION AND LABOR FORCE IN THE SULA VALLEY, 1988

	Population age structure (thousands)			Growth rates 1974-1988 (percentages)		1992 projected populations (thousands)		
	TOT	10-64	65+	URBAN	RURAL	TOT	URB	RUR
CORTES	631	418	22	3.8		732		
San Pedro S.	309	212	10	3.0		348		
Choloma	64	40	2	10.5	0.0	81	54	27
Villanueva	33	21	1	4.2	6.4	44	17	27
La Lima	44	30	1	4.9	0.1	52	35	17
YORO								
El Progreso	104	67	3	7.4	2.5	127	76	51

	Popln. Econ. Active (thousands)			Activity rate %	Employment rate %
	TOT	MEN	WOM		
CORTES	230	165	66	52	90
San Pedro S.	125	81	44	56	91
Choloma	23	17	6	53	88
Villanueva	10	9	1	45	93
La Lima	14	11	3	46	86
YORO					
El Progreso	32	25	8	46	96

Note: Some sub totals do not add to totals, due to rounding

Source: 1988 census and our calculations.

²⁰ In Annex 6, we present greater detail for the municipalities of Choloma, Villanueva, La Lima and El Progreso. Though there is no EPZ in El Progreso, the city is close enough to supply workers to EPZs at La Lima, and is the biggest in the area after San Pedro Sula.

B

b) A projection of labor supply in the Sula Valley

We projected population and PEA for the EPZ areas, assuming constant male and female participation rates,²¹ and extrapolating the 1974-88 growth rates into 1988-92²² (Table 4.2). The total female labor force in the five municipalities in 1992 would be 72,300 (projection 1). Those aged 15-29 (not shown in the table) would be just under half of this, at around 35,000.

If female participation rates rose to 50% (projection 2), the total female labor force would be 110,000 and the 15-29s (not shown) would be roughly 53,000. Approximate figures for each city would be: San Pedro Sula 30,000; Choloma 5,900; Villanueva 3,570; La Lima 4,050; and El Progreso 9,225.²³ In fact, our community survey found that participation rates were close to 50% in Choloma, but still well below this figure in Villanueva (see Table 4.3 below).

We can conclude that natural population growth alone will not meet the EPZs' projected demand for labor. A big increase in female participation rates is crucial. And secondly, the new Choloma EPZs are unlikely to be able to meet their labor needs out of any likely combination of natural population growth and increased local participation rates. They will have to import labor from elsewhere in the valley (depending in turn on adequate worker transport) and/or hope for an increase in migration to the area.²⁴

²¹ We assumed that the age and sex structure of the populations remains as it was in 1988. This is not strictly correct, as the growth process changes the age structure, with the proportion under 10 growing continually. As a result, our estimate of the population of working age may be a little too high. However, since our point is to show that there is a potential labor shortage, we are erring on the cautious side.

²² The populations of the EPZ areas grew at varied rates in 1974-1988. The urban population of Choloma shot up at over 10% a year due to heavy immigration, while the rural population stagnated. In La Lima, urban growth was just under 5% and rural population stagnated. In El Progreso, urban population grew at 7.4% while rural population lagged at 2.5%. In Villanueva, on the other hand, urban growth was 4.2%, well below the 6.4% rural rate (Annex 6). By way of context, national population growth stood at 2.91% in 1988 and fell to 2.83% by 1992 (SECPLAN, 1992).

²³ In 1988 the proportion of the female PEA in the age range 15-19 was 44% in Choloma, 45% in La Lima and El Progreso and 51% in Villanueva. We do not have figure to hand for San Pedro Sula so we have assumed 50%.

²⁴ The other possible outlet is to use more male labor. But participation rates for men are already high, and open male unemployment is relatively low. There is also a cultural problem about retaining young male labor in industries regarded by the "macho" culture as essentially feminine. Interestingly, factories producing jeans find it much easier to attract and keep male workers than those producing womens' underwear!

**TABLE 4.2 PROJECTED ECONOMICALLY ACTIVE POPULATIONS
SELECTED MUNICIPALITIES, AND CORTES, 1992**

(a) Population projection

	<u>Populations:</u>			<u>10-64:</u>
	Urban	Rural	Total	
CORTES (total)			732,300	485,100
Choloma	54,500	26,700	81,200	53,800
Villanueva	17,000	27,400	44,400	28,300
La Lima	34,800	17,500	52,300	35,700
San Pedro Sula			347,700	238,600

El Progreso	76,100	51,200	127,300	82,000
5 cities total			652,900	438,400

(b) PEA projections, assuming:

	<u>(1) 1988 female participation rates</u>			<u>(2) rise to 50% in female participation</u>		
	<u>PEA: (000s)</u>			<u>PEA: (000s)</u>		
	M	F	T	M	F	T
CORTES (total)	192	76	268	192	121	313
Choloma	21	9	30	21	14	35
Villanueva	12	1	13	12	7	19
La Lima	13	4	17	13	9	22
San Pedro Sula	91	49	140	91	60	151

El Progreso	30	9	40	30	21	51
5 cities total	167	72	240	167	110	277

Source: Our calculations, from 1988 census data; see text for explanation of procedures.

In Choloma, there were 14,700 EPZ jobs in June 1992, implying 11,000 jobs for women aged 15-29. This figure is nearly double the projected local female 15-29 labor force of 5,900. However, November 1991 data from ZIP Choloma show that, while 65% of workers are local, 35% travel from beyond the municipality. The main source is San Pedro Sula, which provided 24% of the workers (see table 3.15 in Part 3 of this study). And it is also likely that the local labor supply is already bigger than our projections suggest, due to an acceleration of immigration. We come back to this point below.

c) Evidence from our surveys on participation and employment rates

Evidence from our community survey on female participation rates in Choloma and Villanueva, and on other indicators of labor market conditions, is presented in Table 4.3. The most striking point is that the female participation rate in Choloma is now almost 50%, compared with the rate of 26% in the 1988 census (Annex 6). In Villanueva, the rate is 33%, compared with 11% shown in the census. These figures

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suggest that participation rates have indeed responded to increased job opportunities.²⁵

TABLE 4.3 EAP, EMPLOYMENT AND ACTIVITY RATES OF POPULATION AGED 10 AND OVER, CHOLOMA AND VILLANUEVA, 1992

	Total 10+ In Sample (number)			Economically Active (number)			Activity Rate/1 (percentages)			Unemployment Rate/2 (percentages)		
	Tot	Men	Wom	Tot	Men	Wom	Tot	Men	Wom	Tot	Men	Wom
Choloma	758	332	426	452	246	206	60	74	48	23	22	25
%	100	44	56									
V/nueva	378	184	194	188	124	64	50	67	33	27	19	40
%	100	49	51									
Total	1136	516	620	640	370	270	56	72	44	24	21	29
%	100	45	55									

/1 Activity rate = [Economically active ÷ total in age range]*100

/2 Employment rate = [Employed ÷ Economically active]*100

Note: Economically active is defined as working or having looked actively over the last month, or stating a desire to work immediately. Unemployment includes all the economically active who were not working, excluding the underemployed. However, we found very small proportions who both worked under 36 hours and expressed a desire to work more hours immediately; on this definition, just 4% of the total employed were underemployed.

Source: Community survey.

Probably as a result of higher participation rates, the unemployment rates among our sample are markedly lower than those recorded in 1988: at 27% in Villanueva and 23% in Choloma - compared, respectively, with 7% and 12% in the census (Annex 6).

d) Migration and the EPZs

A further possible explanation of the apparent slack in Choloma is that immigration has boosted population growth in the relevant groups ahead of the rates which obtained in 1974-88. Our sampling method was not designed to infer total population sizes, so we do not present direct data on total population which could show definitely if this had happened. However, we collected information on migratory behavior from both the community and workforce surveys, which is summarized in Tables 4.4 and 4.5, and which tends to support the hypothesis that immigration has accelerated.

The community data on migration show a marked difference between Choloma, where fully 50% of the over-five population is immigrant to the zone, and Villanueva, where only 27% have immigrated. In Choloma, 21% of the population has immigrated in the

²⁵ Part of the difference could arise because the 1988 census data include the rural population, while our sample is totally urban. A priori, we would expect both participation and unemployment rates to be higher in urban areas.

last three years. This supports the idea that population growth there has accelerated due to increased migration. The origin of immigrants is similar in both cases. The great majority (65%) comes from Cortés, followed by the adjacent department of Santa Bárbara in the west (9% in Choloma; 12% in Villanueva) (Table 4.4).

A similar proportion of immigrants was found in our workforce sample: 21% said they had moved to the zone especially to work in the EPZs. This implies that some 3,500 workers have already moved their home to take advantage of EPZ employment. However, the pattern of origin is somewhat different from the community sample. Among the migrators in the workforce, only 17% had moved within the Department of Cortés, while 29% had come from Santa Barbara. Twelve per cent had come from Copán (beyond Santa Barbara), while Yoro (adjacent to the east) had supplied 10%, and Atlantida (beyond Yoro) had supplied 7%.²⁶ Of the 110 EPZ workers we found in the Community survey, 52% were migrants to the area, and 10% had arrived in the last year (data not tabulated). Again, most came from Cortés and Santa Barbara.

These figures suggest that the EPZs have reinforced the long established pattern of migration from the depressed economies of the west towards the Sula valley. The migratory pressure is likely to grow as the Sula Valley labor market tightens and EPZ employers begin to recruit more actively beyond the immediate area. The relative growth of EPZ employment in Villanueva will also tend to accelerate the pressure, as that municipality is more easily accessible to the western hinterland than is Choloma, and the local available labor force is smaller.

²⁶ The 1988 census also found that Santa Barbara was the main source of immigrants to urban centers in Cortés. Other important sources were Yoro and the rural areas of Cortés itself.

TABLE 4.4 MIGRATION IN VILLANUEVA AND CHOLOMA
(Individuals aged 5 and over)

	Choloma		Villanueva	
	No.	%	No.	%
Non immigrants	458	51	326	73
Immigrants - total	<u>436</u>	<u>49</u>	<u>121</u>	<u>27</u>
under 1 year	79	9	16	4
1 to 3 years	120	13	32	7
4 to 5 years	29	3	10	2
6 to 10 years	130	15	23	5
over 10 years	81	9	40	9
(b) <u>Where they came from</u>				
Atlantida	19	4	1	1
Colón	7	2		
Comayagua	5	1	3	2
Copán	13	3	3	2
Cortés	281	64	79	65
El Paraiso	8	2		
Francisco Morazán	9	2	6	5
Gracias a Dios	2	½		
Intibuca	11	3		
Islas de la Bahía	3	½		
La Paz	2	2		
Lempira	2	½		
Ocotopeque	5	1	2	2
Olancho	19	4	1	1
Santa Barbara	38	9	14	12
Valle	4	3		
Yoro	<u>10</u>	<u>2</u>	<u>6</u>	<u>5</u>
Total	436	100	121	100

Source: Community survey

TABLE 4.5 MIGRATION TO WORK IN EPZs

<u>Department of origin</u>	<u>No. of cases</u>	<u>% of total</u>
Santa Barbara	12	29
Cortés	7	17
Copán	5	12
Yoro	4	10
Atlantida	3	7
<u>Other</u>	10	24
Total	41	100

Source: Workplace survey

e) Previous employment of EPZ workers

Our sample of EPZ workers is split roughly 50-50 between those who had left another job to come to work in the EPZ (53.5%) and those who had not previously been working (46.5%). Most of the women who were previously working had jobs as laborers or as domestic servants; most of the men were laborers. Very few workers seem to have come from agricultural jobs to the EPZs - although the above evidence on migration suggests that many workers migrated from rural areas where they were unemployed.

Workers previously employed in domestic service account for 8% of the total sample, while those who had jobs as manual workers accounted for some 20%. If we apply these percentages to the total EPZ employment at May 1992 of 17,500 (see page 4 above), this would suggest that the EPZs have drained 1,400 domestic servants from the middle class households of the San Pedro Sula area, and 3,500 workers from industrial employment outside the EPZs.²⁷

TABLE 4.6 PREVIOUS OCCUPATION OF EPZ WORKERS

	<u>Women</u>	<u>Men</u>	<u>Total</u>	<u>Percent</u>
(A) <u>Previously employed</u>	<u>79</u>	<u>27</u>	<u>106</u>	<u>53.5</u>
Domestic service	16	0	16	8.0
Laborer				
-Industrial	10	6	16	8.0
-Agricultural	0	3	3	1.5
-not specified	18	7	25	12.5
Salesperson:				
-shop assistant	2	0	2	1.0
-informal	3	0	3	1.5
-not specified	2	0	2	1.0
Other employment	28	11	39	19.5
(B) <u>Previously not employed</u>	<u>87</u>	<u>5</u>	<u>93</u>	<u>46.5</u>
Housewife	41	0	41	20.5
Student	22	4	26	13.0
Unemployed	18	1	19	9.5
Other	6	0	6	3.0
TOTAL	166	32	198	100.0

Source: Workplace survey

These are considerable proportions of the total workforce in the respective sectors. According to the Encuesta Permanente de Hogares de Propósitos Múltiples of the

²⁷ The latter estimate is made on the supposition that all those identifying themselves as having previously been "laborers", and who did not explicitly specify that they worked in agriculture, were active in the urban labor market.

Dirección General de Estadísticos y Censos, in September 1991, employment in manufacturing in San Pedro Sula was 31,948, and employment in domestic service totalled 8,394. Total employment in San Pedro Sula was 112,312 (DGEC 1991: 33, 47).²⁸

There is an pool of unemployed workers from which other employers can expect to replace workers lost to the EPZ sector, but it is not as big as is sometimes suggested. In September 1991 there were 7,487 unemployed in San Pedro Sula, of whom just 2,173 were women, while among the economically inactive there were a further 8,257 who said they would like to work immediately if there were a job available, of whom 6,310 were women (DGEC 1991: 50.55).

Even assuming it is fairly easy to replace workers lost to the EPZs, one would expect firms to face some temporary difficulty with recruitment and training, so that physical productivity could fall. In addition, since the wage rates in the EPZs are generally above non-EPZ rates, they could face upwards pressure in wage rates, further increasing unit labor costs.

Table 4.7 analyses EPZ employees' motives for moving to the EPZ, and shows that financial motives are dominant both for workers who came from other jobs and for those previously unemployed. Table 4.8 shows the average previous monthly earnings of workers who came from other jobs. The average for operatives was L.330; for women operatives, it was L.312. These figures are well below the average earnings of basic labor in the EPZs reported in Table 2.15 above (L.636), giving further confirmation that the impact of EPZ employment on household income is strongly positive.²⁹

Conclusions

The data presented in this chapter point towards some obvious conclusions, which have implications for public policy. First, that, notwithstanding increased participation rates, the capacity of the EPZ sector to fulfill the medium term growth potential of 60,000 jobs will depend to some extent on immigration to the zone. Second, that the migratory pressure might be reduced if public transport were improved to widen the recruitment areas of the EPZs. Third, that it would now make sense for planners to begin to promote EPZ development in other areas where there is more obvious slack in the labor market.³⁰ And fourth, that the EPZs' development creates training needs outside the sector itself, especially in related industries which lose labor to the EPZs.

²⁸ These totals do not include employment in the industrial corridor outside San Pedro Sula itself.

²⁹ The minimum wage was raised by 27% in mid 1990, but the EPZ minimum of L.395 pcm was still well above the average the workers were earning before they came to the EPZ.

³⁰ In the Central District (i.e. Tegucigalpa) in September 1991 there were over 20,000 unemployed and a further 27,000 economically inactive who said they would like to work immediately if a job were available (DGEC 1991 b: 50,55).

TABLE 4.7 MOTIVES FOR DECIDING TO WORK IN EPZ

	<u>Women</u>	<u>Men</u>	<u>Total</u>
(A) <u>Previously employed</u>	%	%	%
Better salary	65	60	63
Better conditions	23	56	38
Closer to home	24	20	23
To be with friends	1	4	2
More job security	8	8	8
(B) <u>Not previously employed</u>			
For money	82	80	82
No job available before	6	0	5
Other motive	13	20	13

Interviewees were allowed to mention more than one motive

Source: Workplace survey

TABLE 4.8 AVERAGE PREVIOUS EARNINGS BY PRESENT JOB

	Average prev. earnings L./month	Std Dev	No. of cases	95% C.I.
All EPZ workers	370.5	193.23	106	±10%
Machinists	330.8	164.13	80	±11%
Women	312.3	159.60	65	±13%
Men	410.7	164.75	15	±22%
Supervisors	526.6	156.29	5	±34%
Women	621.7	88.93	3	
Men	384.0	118.79	2	
Others	484.6	242.16	21	±23%
Women	478.4	239.29	12	
Men	492.8	260.28	9	
Total Cases			199	

Source: Workplace survey

TABLE 4.9 HOW WORKERS HEARD ABOUT EPZ JOB OPPORTUNITIES

<u>% who mentioned:</u>	<u>Women</u>	<u>Men</u>
Newspapers	6	6
Friends	68	75
Publicity leaflets	5	3
Other	21	16

Source: Workplace survey

CHAPTER 5 - FAMILY PLANNING AMONG EPZ WORKERS AND THEIR COMMUNITIES

Both our community and workplace surveys included modules on family planning behavior and attitudes. In the community survey, we restricted the question to women aged 15-44, collecting data on 396 women. In the workplace survey, we collected data on all respondents of either sex (199 cases).³¹

Before we report our results for this section, a word of warning is in order. It is not easy to get accurate survey data on family planning issues, and specialized survey methodologies have been developed to overcome this. While we followed the standard questionnaire formats used in recent specialized surveys on this theme, we did not have a team of interviewers specially trained to spot evasive answers. It is therefore possible that our data are not wholly reliable. For this reason, we also report data for the San Pedro Sula area (Region 3 of the Ministry of Public Health) from the national Epidemiology and Family Health Survey (EFHS), undertaken in 1991 for the Ministry of Public Health and ASHONPLAFA, as an alternative point of reference on some key variables (EFHS, 1992).

In our community sample, 42% of women aged 15-44 said they were sexually inactive, giving this as the reason they did not use any family planning technique. Thirty five percent of the sexually active (20% of the total sample) said they plan their families, and 65% of the active (38% of the total sample) said they do not plan. There was a slightly higher level of sexual activity in the Choloma sample, and a lower level of planning: only 30% of the sexually active plan in Choloma, against 41% in Villanueva. In the workforce sample, there is a lower level of sexual activity than in the community as a whole, with 52% inactive, reflecting the lower average age of the sample (Table 5.1).

Data from EFHS for Region 3 show that 26% of women aged 15-44 said they had never had any sexual relationship. This is well below our community survey figure of 42% sexually inactive. Although the question asked in the two surveys is a different one (since a person may be sexually inactive at present even though they have been active previously), the difference between the two figures suggests the possibility that we are over-reporting sexual inactivity among our community sample. EFHS also found a higher level of family planning activity among the sexually active than is the case in our data: 51% of the sexually active women for whom there were data had used some form of contraception in the last thirty days, as against 38% in our community sample.

³¹ We present institutional information related to family planning services available in both communities and the EPZ workplaces in Part 3, section 4.4 ii.

According to data from our workforce survey, the sexually active are much more likely to plan than was the case for the community sample: 54% plan and 46% do not plan. This is some indication that the workplace family planning programs of the IHSS and of ASHONPLAFA are having some impact.³² In both the community and workplace surveys, the planners are divided about 50-50 between those who decide themselves to plan, and those who do so jointly with their partner (Table 5.6).

Among the non-planners, fears for health (40%), belief in being "careful" (22%) ignorance of methods (11%) and partner's opposition (9%) are the main reasons for not planning in the community sample. This is a somewhat different pattern from the workplace sample, where economic reasons were most important (38%), followed by fears for health (28%) and partner's opposition (21%). Religious and moral reasons do not figure as motives for not planning in either survey (Table 5.2).

Among the planners' motives (not tabulated), economic reasons predominate in both the community sample (87%) and workforce sample (75%); however, in the latter, health reasons also appear to be a significant motive for planning (22%), suggesting that the reproductive risk education programs in the EPZs might be getting home. In Choloma, where a higher proportion of women work in EPZs, a higher proportion have had talks on reproductive health (Table 5.6).

The pill and condom are the best known forms of contraception, followed by the coil (IUD) and female sterilization. These four methods were also the most used (Table 5.3). Sterilization is used primarily among women of 30 or more (31 of 35 cases in our community sample). There is more knowledge about contraception among the workforce than in the community as a whole, with 67% knowing about the pill compared with 21%, 69% knowing about condoms, against 25%, and 40% knowing about the coil, against 12% (Table 5.3). This is probably explained by education programs in the EPZs, along with the socializing effect of belonging to a workforce rather than being at home.

The lower levels of use of different types of contraception in the workforce, compared with the community, are related to the younger age range and higher proportion of sexual inactivity in the sample. The higher knowledge level in the workforce sample should go some way to ensure that the proportion of the presently inactive who become planners as soon as they become sexually active will be higher for the workforce than for the community as a whole.

³² The difference is not likely to be explained by the age differences in the samples, because the propensity to plan is somewhat higher, not lower, among the older women in the community sample (Table 5.1). The IHSS and ASHONPLAFA programs in the EPZs are discussed in Part 3, Chapter 4, Section 4 below.

The most favored family size is 3 children, followed by 2. This compares with average fecundity for Honduran women as a whole of 5.2 in 1992. Most women (39%) think their early 20s is the best time to start a family. Only 10% think they should wait until they are 25 or older. Attitudes to the ideal time to start a family and the ideal family size are both clearly age-related. Younger women are more likely to think they don't want a family, or that it should be smaller, and to think it should be started later; older women want bigger families and think they should be started younger (Table 5.7).

TABLE 5.1 SEXUAL ACTIVITY AND FAMILY PLANNING, CHOLOMA AND VILLANUEVA AND EPZ WORKERS

Women aged 15-44 for community sample, all respondents for workforce sample

	Community						Workforce	
	Choloma		V/nueva		Total		No.	%
	No.	%	No.	%	No.	%		
Total in sample	<u>266</u>	<u>100</u>	<u>130</u>	<u>100</u>	<u>96</u>	<u>100</u>	<u>199</u>	<u>100</u>
ages 15-19	68	26	39	30	107	27		
20-29	103	39	46	35	149	38		
30-44	95	36	45	35	140	35		
Sexually inactive	<u>109</u>	<u>41</u>	<u>59</u>	<u>45</u>	<u>168</u>	<u>42</u>	<u>102</u>	<u>51</u>
ages 15-19	50	19	34	26	84	21		
20-29	43	16	18	14	61	15		
30-44	16	6	7	6	23	6		
Plan	<u>49</u>	<u>18</u>	<u>29</u>	<u>22</u>	<u>78</u>	<u>20</u>	<u>51</u>	<u>26</u>
ages 15-19	1	0	0	0	1	0		
20-29	28	11	12	9	40	10		
30-44	20	8	17	13	37	9		
Dont plan/1	<u>108</u>	<u>41</u>	<u>42</u>	<u>32</u>	<u>150</u>	<u>38</u>	<u>45</u>	<u>23</u>
ages 15-19	17	6	5	4	22	6		
20-29	32	12	16	12	48	12		
30-44	59	22	21	16	80	20		

/1 Includes 4 pregnant women in Choloma and 4 in Villanueva. No women in the workforce survey said they were pregnant.

Source: Community and Workforce surveys

TABLE 5.2 REASONS FOR NOT PLANNING AMONG THE SEXUALLY ACTIVE

Percentages of sexually active women aged 15-44 (community sample) and of all sexually active men and women (Workforce sample) who plan

	Community			Workforce
	Choloma %	V/nueva %	Total %	%
Economic	0	4	1	38
Health	37	40	40	28
Religion/moral	3	0	2	3
No knowledge	17	0	11	7
Fear	5	11	7	0
Partner opposed	10	7	9	21
Careful	20	25	22	0
Pregnant	7	14	9	0
(No. analyzed)	(59)	(28)	(87)	(29)

Source: Community and Workforce surveys

TABLE 5.3 FAMILY PLANNING METHODS KNOWN AND USED

Percentages of all women aged 15-44 for community sample, all respondents for workplace sample

	Community						Workplace	
	Choloma		V/nueva		Total		Know %	Use %
	Know %	Use %	Know %	Use %	Know %	Use %		
Pill	23	10	16	9	21	10	67	5½
Condom	28	1	19	1	25	1	69	4½
IUD/coil	16	8	12	8	15	8	40	4
Female sterilizn.	14	9	7	9	12	9	29	1½
Male sterilizn.	5	½	4	0	4	½	28	0
Injection	11	½	6	0	10	½	33	1
Foam	8	0	5	1	7	½	27	2
Rhythm	8	½	8	2	8	1	29	½
Retiring	6	1	5	1	5	1	24	½
(No. of respondents)	(266)		(130)		(396)		(199)	

Source: Community and Workforce surveys

TABLE 5.4 WHERE USERS GET THEIR CONTRACEPTIVES

	Percentage of women who plan:		
	Choloma	Villanueva	Total
Private hospital/clinic	3	6	4
Health center	6	8	6
IHSS hospital	12	8	10
MSP Hospital	6	10	7
ASHONPLAFA puesto	14	6	11
ASHONPLAFA clinic	15	23	18
Chemist	14	13	14
Pulperia	0	10	3
Other/ no data	30	16	27
	100	100	100

Source: Community survey

TABLE 5.5 WHO DECIDES TO PLAN

Women who plan (community) and all who plan (workforce):

	Choloma	Villanueva	Total	Workplace
	%	%	%	%
Herself	43	54	47	50
Jointly	57	46	53	50

Source: Community survey and workforce survey

TABLE 5.6 PROPORTION WHO HAVE HAD TALKS ON REPRODUCTIVE HEALTH

Women aged 15-44 (community) and whole sample (workforce):

	Community			Workforce
	Choloma	V/nueva	Total	
	%	%	%	%
Have had talks	50	42	47	48
Heard of sexually transmitted disease	69	58	65	93

Source: Community and Workforce surveys

TABLE 5.7 WOMENS' OPINIONS ON THE IDEAL AGE TO START A FAMILY AND IDEAL NUMBER OF CHILDREN

Percentages of respective age ranges, community sample; and of men and women (workforce sample):

(a) Ideal age to start a family

	<u>Ideal age to start:</u>			
	Never	15-19	20-24	25+
<u>Community sample</u>				
<u>Age now:</u>	%	%	%	%
15-19	52	11	31	9
20-29	28	18	39	12
30-44	10	34	44	8
Whole sample	29	23	39	10
<u>Workforce sample</u>				
Women	1/2	20	62	17
Men	0	6	44	50

(b) Ideal number of children

	<u>Number of children:</u>						
	0	1	2	3	4	5	>5
<u>Age now:</u>	%	%	%	%	%	%	%
15-19	51	3	25	17	5	0	0
20-29	29	2	21	35	9	2	1 1/2
30-44	12	3	13	30	27	5	10
Whole sample	29	3	19	28	14	2 1/2	4

Source: Community survey

CHAPTER 6 - RECOMMENDATIONS FOR FUTURE MONITORING OF EPZ IMPACT

In the foregoing chapters, we have presented and analyzed a large amount of data related to the impact of the EPZs. The variables covered are those specified in the contract for the present study. In the present chapter, we present a summary format for the data which seem to us the most useful indicators of the ongoing impact of the EPZs, and we make recommendations for a cost-effective methodology to update these "base line" data in future years. The suggested "key indicators" are presented below. The proposed methodology for updating them is as follows:

Frequency

The EPZs are growing very rapidly, so the more frequently the data can be updated, the better. However, the costs of undertaking survey work are high. We therefore suggest that annual intervals are appropriate. This allows enough time between surveys for interesting changes to emerge, without allowing the database to get badly out of date. The next survey should therefore be done in February 1993.

Workforce surveys

We suggest an annual survey of 200 workers, using the same methodology employed in the present survey. The questionnaire should be revised in the light of the experience of the first exercise, but we do not think major changes are needed. We suggest that the sample should be newly drawn each year. This is necessary because it would in practice be difficult to re-trace the same individuals, as many of them will have moved jobs; and it is methodologically desirable, as we want to see how the EPZ worker population changes.

The sample in our first exercise was limited by access problems, which somewhat reduce its representativity, with 50% of the sample concentrated in ZIP Choloma. As the other EPZs grow relative to ZIP Choloma, this sample will become unrepresentative. Ideally, the scope should be widened to include all parks, selecting two firms in each park, and dividing the total interviews among the selected firms in proportion to their respective employment. This would generate an average of 14 interviews per firm involved, which should be acceptable to the employers. The company sample should be structured to get a good proportional representation of different product types and company nationalities.

Community surveys

In contrast, we suggest that the best way of updating the "baseline" community information is to return to exactly the same 300 houses in each study period. In this way, we will get a very clear impression of the changing conditions of the households reported on in the present study. We will be able to see exactly how their employment position, income, spending, social services etc. develop as the EPZs continue growing.

We believe this procedure is justified, because the present household sample seems to be representative on comparison with the 1988 census data. In addition, the alternative procedure, of drawing a new sample using the same sampling methodology as before, could give rise to reported changes which are due to sample differences, not to changes in the population universe.³³

The drawback with this procedure is that it would leave out of account any new concentrations of population which arise as a result of EPZ development (eg new estates built for EPZ workers; new marginal barrios). We suggest that small additional samples could be added to deal with this problem if it arose, but we think it is unlikely to arise in Choloma or Villanueva by February 1993. The inflows of population are more likely to be reflected in increased occupation densities in the areas already in the sample.

Again, the questionnaire should be revised in the light of the experience of the first exercise, but we do not think major changes are needed.

Interviews with EPZ owners

Systematic interviews should be carried out to establish data on present and future potential employment, types of company (by product and nationality), and social security regimes.

Key indicators for EPZ impact

In the following three pages, we present a set of key indicators which should be updated by the future years' surveys. They are grouped into the following sets: employment and earnings; social conditions; labor market indicators; family planning indicators.

³³ This is much less likely to be a problem in the case of the workforce survey, because the population universe in that case is much more homogenous than for the community as a whole.

Summary indicators of EPZ impact, at June 1992

A. EPZ EMPLOYMENT AND EARNINGS

Source:

1 Total employment, by municipality and EPZ

La Lima:		<u>1,500</u>
	ZIP Continental	1,500
Villanueva:		<u>1,330</u>
	ZIP Villanueva	210
	ZIP Búfalo	1,120
Choloma:		<u>14,700</u>
	INHDELVA	2,500
	ZIP Choloma	6,500
	Parque Galaxy	1,700
	CHIP	3,800
	ZIP San Miguel	<u>200</u>
Total:		17,530

Interviews
with
EPZ owners

2 Employment structure in the EPZs

Men 16% Women 84%
Under 31 90%
Basic labor 80%
Intermediate labor 18%
Managerial labor 2%

Workforce
survey

**3 Average monthly earnings of EPZ workers
compared with averages in
surrounding communities**

	<u>EPZ</u>	<u>Av.Chol.</u>	<u>Av.V/nueva</u>
Total:	L.670	614	624
Men:	L.786	686	657
Women:	L.648	525	543

Workforce &
Community
surveys

**4 Average household incomes for households
with and without EPZ workers present**

With EPZ worker:	L.1,305
Without EPZ worker:	L. 964

ditto

/continued

Source:

5 <u>IHSS cover of EPZ workers (percentages)</u>	
Sistema Médico de Empresa	38%
Enfermedad y Maternidad	8%
Invalidez, Viejez y Muerte	54%

Interviews
with
EPZ owners

B. SOCIAL CONDITIONS IN EPZ AREAS

1 <u>Average household size</u>	
Choloma: 5.6	Villanueva: 5.3

Community
survey

2 <u>Indicators of social needs</u>		
	Chol.V/nueva survey	
a. Population not living in individ.house/apartment	8%	12%
b. Households without:		
piped water	8.5%	5.7%
electricity	6.4%	10%
flushing toilet	47%	86%
connexion to sewer	53%	91%
c. Proportion of average total spending used for food	60%	70%

Community
survey

/continued

Source:

3. <u>Wealth indicators</u> ³⁴				
a. Assets:				
% of households				
with:	Chol	V/N	EPZ	Non-EPZ
sewing machine	34	27	28	33
stove	63	46	57	58
push bike	42	25	43	34
fridge	27	21	24	26
TV	71	64	74	67
b. Savings				
% of h/holds with any savings:	Chol	V/N		
	14	11		
Av. savings (L.) of h/holds with savings:			1,365	1,740
c. Education				
% of popln aged 10 + with:	Chol	V/N		
-No education			15	13
-Primary only			67	55
-Secondary			18	28
-Higher			1	3½

ditto

C. LABOR MARKET INDICATORS

1 <u>Participation and unemployment rates</u>		
	Chol	V/N
<u>Participation</u>		
Men	74	67
Women	48	33
<u>Unemployment</u>		
Men	22	19
Women	25	40
2 <u>Migration</u>		
Proportion of EPZ workforce who migrated to work in EPZ: 20%		
3 <u>Previous occupation of EPZ workers</u>		
Unemployed:	46.5%	
Employed:	53.5%	

Community survey

Workforce survey

Workforce survey

Both surveys

D. FAMILY PLANNING INDICATORS

Proportion of sexually active women who plan:	Chol	V/N	EPZ Workforce
	31%	41%	53%

³⁴ Chol = all households in Choloma sample; V/N = all in Villanueva sample; EPZ = all h/holds with an EPZ worker member; Non EPZ = all h/holds with no EPZ worker member

PART THREE

THE SULA VALLEY'S SOCIAL AND ECONOMIC INFRASTRUCTURE IN THE FACE OF EPZ DEVELOPMENT

CHAPTER 1 - INTRODUCTION

Section 2 was dedicated to a description of the socio-economic characteristics of the EPZ workers, their families, and the communities of Choloma and Villanueva where most of the EPZ development has been, or will be centered. The present section changes the focus of the study to the public services which are needed by the EPZs themselves and by the surrounding communities. The point of departure for this section of the study was a round of structured in-depth interviews with the following groups of people (see Annex 7 for a full list of interviewees):

- owners or senior managers of the EPZs (7 interviews)
- owners or senior managers of companies located in the EPZs (10, spread over 4 EPZs)
- owners or senior managers of export companies located outside the EPZs (3 interviews)
- senior officials of organizations closely linked to the EPZs (4 interviews)

In each case, we sought to establish the principal characteristics of their company or organization, and then to record their opinions about the public services relevant to the operation of their enterprise, either directly or through their impact on the workforce, and we asked interviewees to identify priority areas for concern. We then conducted semi-structured interviews with senior officials and managers responsible for each of the services under study.

The panorama of concerns about factors which might undermine the success of EPZ companies is presented first. Then, for each service, we present the results of our user survey in more detail. This is followed by a discussion of the present and future prospects for the service based on interviews with providers and a review of documentation.

CHAPTER 2 - PROBLEM AREAS ACCORDING TO THE EPZ SECTOR

We asked each interviewee to indicate up to three factors of any sort - including, but not restricted to, public services - which might in their opinion impact negatively of the future success of their company or the groups they represented.¹ This question allows us both to prioritize concerns on particular public services, and at the same time, to measure the relative importance of public services, compared with other factors, for the future success of the non traditional manufacturing export sector in the Sula Valley (Table 6.1).

The primary concern of our interview subjects was potential labor problems of different types, with 29 mentions. Apart from the fear of unionization, major concerns were worker transport, training and the closely related questions of the cost and quantity of labor available to them. Social infrastructure for the worker communities was considered important, with 20 mentions. Direct services to export companies were less of a worry, with only 12 mentions, while the need for long term planning and environmental control (in the "others" section) merited 6 mentions between them; political stability had 5.

Interviewees' opinions are to some degree correlated with the interests of the different contestants, so that the profile of EPZ owners' opinion is somewhat distinct from that of their clients. While both groups share a concern with potential labor problems of different types, EPZ users are somewhat more concerned about this than EPZ owners. The users' replies highlight their fears of labor shortage, and of related factors such as insufficient training capacity and worker transport. There are clearly already labor supply tensions in Choloma. The EPZ users were also concerned (11 mentions) about social conditions in the surrounding communities.

The need for adequate worker housing was a particular concern, as was the need for childcare provision. These factors are obviously directly related to labor supply. However, social conditions merited only 2 mentions by the EPZ owners and none by non-EPZ exporters. This could reflect the fact that Hondurans tend to regard the social conditions in marginal communities as a norm, while the park users are often foreigners who regard the conditions as inferior to normal acceptable standards. Interestingly, the officials of organizations related to the export drive (FIDE and the CCIC) expressed more concern on this issue than the park owners - as they did on the issue of environmental pollution. Although in general the survey indicated that problems with services within the parks were not a major source of concern to either owners or users, the latter had a somewhat less phlegmatic opinion than the owners - especially in relation the cost of telephones and electricity.

¹ The interviewees were not presented with a list of options; rather, they were asked to reflect on their concerns of all sorts for their future success.

Among the "other factors", the park owners' concern for political stability was very marked. One marketing manager mentioned that a completely groundless news story to the effect that a group of young officers intended to organize a military coup in early 1992 had led to the withdrawal of an important potential client. Interestingly, no-one mentioned the fear that the North American Free Trade Area might impact negatively on demand for EPZ space in Honduras.

Park owners expressed concern about the cost of funds - not a factor for their clients, who bring their capital from abroad - and about the need for planning of EPZ development. Owners of parks already established and with spare capacity still available are concerned that the supply of factory space should not grow further until their own space has been filled. This latter might be read as a coded admission of concern that labor supply limits will constrain the eventual total demand for EPZ space in the Sula Valley.

TABLE 6.1 FACTORS WHICH MIGHT THREATEN THE FUTURE SUCCESS OF THE EPZs AND OF OTHER EXPORTERS

Factor	Number of contestants who mentioned each factor:				Total
	(a) EPZ owners	(b) EPZ users	(c) non EPZ exporters	(d) related organizations	
<u>Services to firms</u>					
Electricity	3	3	0	1	7
Phones	0	3	0	0	3
Customs	0	1	0	0	1
Services- general	0	0	1	0	1
TOTAL	3	7	1	1	12
<u>Social infrastructure and social services</u>					
Housing	1	3	0	3	7
Health services	0	1	0	2	3
Childcare	0	3	0	0	3
Education	0	1	0	0	1
Community water supply	0	2	0	2	4
Social services- general	1	1	0	0	2
TOTAL	2	11	0	7	20
<u>Labor market considerations</u>					
Unions	3	3	1	1	8
Labor code	0	2	0	0	2
Minimum wage level	0	0	1	0	1
Labor cost	1	1	0	0	2
Labor supply (quantity)	1	3	0	0	4
Labor quality (training)	0	2	1	3	5
Worker transport	1	3	0	0	4
Labor- general	3	0	0	0	3
TOTAL	9	14	3	4	29
<u>Other factors</u>					
Political stability	5	0	0	0	5
Finance costs	1	0	1	1	3
EPZs' building capacity	1	0	0	0	1
Bureaucracy	0	1	0	1	2
Planning of EPZ development	2	0	0	2	4
Environmental pollution	0	0	0	2	2
Weakening of investment promotion activity	1	1	0	0	2
TOTAL	10	2	1	6	19

CHAPTER 3 - DIRECT SERVICES TO THE EPZS

This section reviews the public services directly consumed by the EPZ sector: electricity, telephone, water and sewage disposal, shipping, port and customs services and roads. The format for each section is the same. We begin by commenting in detail on the EPZ sector's opinions about the service and go on to discuss the present and future supply of the service. The section is largely based on interviews with experts (listed in full in the Annex 7), combined with a review of recent studies available to us.

3.1 Electricity

i) Users' opinions

The electricity service was generally viewed as good by both EPZ owners and their clients and by the export companies operating outside the EPZs. Two EPZ owners (Continental and Villanueva) complained of delays in getting an adequate service installed. Patricia Rosenthal, manager of ZIP Continental, said that her engineers had estimated they needed a 600 kw/h supply but ENEE had estimated 200 kw/h. Sra. Rosenthal was the only respondent who highlighted electricity as a major immediate problem.

There is a general concern about the future overall supply capacity of ENEE in the face of growing demand, and we were left in little doubt that serious disruptions in the reliability of electricity supplies would be extremely damaging to the EPZs' future development. These concerns have been widely reported in the local press during 1992, and the CCIC has pressured the ENEE to develop plans for adequate electricity supply to keep the EPZ sector growing. Investors have relocated to Honduras from the Dominican Republic due to power supply problems there.

TABLE 6.2 USER OPINIONS ON THE ELECTRICITY SERVICE

The number who expressed each opinion

G= good, B= bad, I= indifferent; H= high, L= low; Y= yes, N= no

	Quality			Cost			A problem?	
	G	B	I	H	L	I	Y	N
EPZ owners (7)	5	2	0	2	0	5	1	6
EPZ users (10)	7	1	2	5	1	4	0	10
Non-EPZ exporters (3)	2	1	0	1	0	1	0	3

There was a consensus that the cost of electricity was somewhat high; this was expressed in very strong terms by some respondents. For example, Roberto Larios of CHIP Choloma said simply "it's robbery - they charge whatever they want." There appears to be some incongruity between the consensus that maintenance of power supplies is a top priority and the universal reluctance to pay rates which might be sufficient to finance an adequate investment program by the electricity corporation. This is underlain by skepticism as to the probability that the money paid will find its way into such investments.

ii) Electricity supply to the EPZs

Table 6.3 shows indicators of the supply and demand for electricity in the Sula Valley and nationally, with projections through to the year 2,000. The data have been supplied by ENEE. The overall scenario is fairly clear: demand growth in the Sula Valley ran ahead of national demand in 1987-91 (with an average compound annual increase of 10.1% against 8.2%). ENEE is projecting the same rate of growth for Sula Valley demand through to 1996, with the fastest growing zone being Choloma (almost 15% a year). Within the industrial parks sector, the Choloma parks dominate demand at present, and will still do so in 1996, when they are projected to account for 75 GW/h of 95.7 GW/h total EPZ demand.

The effective constraint on immediate supply for the different EPZ areas is local transmission capacity. Ing. Rigoberto Castillo of ENEE in San Pedro Sula agreed that there had been some problems establishing adequate power supplies to the EPZs, and argued that part of the problem was a lack of forward planning by EPZ developers. ENEE needs to see properly defined projects one to two years before investment in new transmission lines and sub stations needs to be operational. "Putting up a new power line isn't like hanging a clothes line," he said. The recent establishment of a liaison committee between ENEE and the CCIC has improved forward planning, he said. In general, he believed that the ENEE would be capable of satisfying the EPZs' needs in the coming years.

ZIP Continental at La Lima is at present being supplied by a provisional arrangement which draws power from the La Puerta sub station in San Pedro Sula, which has capacity of only 14.5 MW. The Búfalo EPZ is supplied from the same station, as is the Chamelecón area of San Pedro Sula. However, a new sub station with 25 MW capacity, financed by Spain, Mexico and Venezuela, will be operating at La Lima by mid 1994 at the latest. ENEE expects the EPZ and the associated housing development (see below) to take between 15 and 20 MW of the capacity, leaving spare capacity for a possible expansion of the airport at La Lima. Once the La Lima sub station is operating, there should be adequate future capacity at La Puerta for the Búfalo EPZ.

In Choloma, there is a 25 MW sub station, which is adequate for the present needs of the area. ENEE plans to step up capacity at Choioma using mobile transmission units of 25 MW as necessary. There are three such units in Honduras at present.

**TABLE 6.3 ELECTRICITY DEMAND IN THE SULA VALLEY
HISTORIC CONSUMPTION IN GW HOURS, 1987-91**

	1987	1988	1989	1990	1991	average % ann.growth
Villanueva	21.9	24.0	27.3	28.7	25.6	4.0
San Pedro Sula	267.0	293.3	312.6	353.1	383.6	9.5
La Lima	9.6	10.6	11.5	12.9	14.8	11.4
Choloma	20.2	22.2	24.7	33.0	45.5	22.5
Puerto Cortes	27.7	30.4	36.4	38.2	40.1	9.7
Sula Valley total	346.4	380.5	412.5	465.9	509.6	10.1
National total	1145.5	1258.0	1359.3	1489.5	1568.5	8.2
Sula Valley % of national total	30.2	30.2	30.3	31.2	32.5	n/a

Source - ENEE

The new 50 MW Villanueva sub station supplies the industrial corridor in the immediate vicinity of the town, the Guanchias banana farms and a large area of Santa Bárbara. An explosion destroyed a transformer in early 1992, causing L1.5 to L2.0 mn of damage and cutting transmission capacity from 50 MW to 25 MW. However, the sub station should be back to full capacity by the end of 1992, and can carry the present demand level with only a slight overload until then.

(iii) The global supply-demand balance

The ENEE planning division's "basic scenario" for projected global balance between generating capacity and demand through to 2,000 is shown in Table 3.5. These figures suggest that the country's electricity supply situation is under control.

According to the ENEE projections, peak demand will grow at an average annual compound rate of 3.8% through the rest of the decade. ENEE expects to keep capacity narrowly ahead of peak demand by steadily expanding thermal generating capacity through the decade. At present thermal capacity is 80 MWs, divided between three plants: Sulzer (30 MWs), Alstom (30 MWs) (both at Puerto Cortés) and a third plant at La Ceiba (20 MWs). According to the projections, one GT-50 plant will be commissioned in 1995 and a second in 1998, each adding 48 MWs to capacity. In 2,000 a further two DS-20 plants will add another 40 MWs.

**TABLE 6.4 PROJECTED SULA VALLEY AND
EPZ ELECTRICITY DEMAND, GW HOURS**

<u>SULA VALLEY:</u>	1991	1992	1993	1994	1995	1996	Av.ann rise.(%)
<u>Industrial</u>							
Villanueva	16.4	18.04	19.84	21.83	24.01	26.41	
SPS	126.4	139.04	152.94	168.24	185.06	203.57	
La Lima	1.9	2.28	2.15	2.76	3.03	3.34	
Choloma	14.6	16.06	17.67	19.43	21.38	23.51	
Pto.Cortés	14.5	15.23	15.99	16.79	17.62	18.51	
Sub Total	173.8	190.65	208.95	229.04	251.11	275.34	9.6
<u>Residential</u>							
Villanueva	5.08	5.59	6.15	6.76	7.44	8.18	
SPS	120.3	132.66	145.93	160.52	176.57	194.23	
La Lima	8.5	9.35	10.29	11.31	12.44	13.69	
Choloma	8.1	8.91	9.8	10.78	11.86	13.05	
Pto.Cortés	11.7	19.89	21.88	24.07	26.47	29.12	
Sub Total	153.98	176.4	194.04	213.44	234.79	258.26	10.9
<u>Commercial</u>							
Villanueva	3.08	3.3	3.53	3.77	4.04	4.32	
SPS	102.3	107.42	112.79	118.43	124.35	130.56	
La Lima	3.08	3.39	3.73	4.1	4.51	4.96	
Choloma	69.2	83.4	95.5	109.82	126.29	145.24	
Pto.Cortés	9.6	10.56	11.62	12.78	14.06	15.46	
Sub Total	187.26	207.7	227.15	248.9	273.24	300.54	9.9
<u>Totals</u>							
Villanueva	24.56	26.92	29.52	32.36	35.49	38.91	9.6
SPS	349.3	379.12	411.66	447.18	485.98	528.36	8.6
La Lima	13.48	15.02	16.52	18.17	19.99	21.99	10.3
Choloma	91.9	108.01	122.96	140.03	159.53	181.8	14.6
Pto.Cortés	35.8	45.68	49.48	53.63	58.15	63.09	12.0
TOTAL	515.04	574.74	630.14	691.38	759.14	834.15	10.1
<u>PROJECTED DEMAND OF EPZs IN GW HOURS BY ZONE:</u>							
Choloma	43.1	51.7	62.0	68.2	75.0	14.9	
Villanueva	0.79	1.6	3.2	4.0	5.0	58.6	
Búfalo	3.5	5.2	6.5	7.1	7.9	22.6	
La Lima	3.5	5.2	6.5	7.1	7.9	22.6	
TOTAL	50.8	63.7	78.2	86.5	95.7	17.2	

Source - ENEE

TABLE 6.5 GLOBAL SUPPLY AND DEMAND PROJECTIONS (PEAK CAPACITY) MW

	1993	1994	1995	1996	1997	1998	1999	2000
Installed capacity:								
<u>Thermal</u>	80	86	134	134	134	182	182	222
<u>Hydro</u>	431.5	431.5	431.5	431.5	431.5	431.5	431.5	431.5
-Fco. M.	300	300	300	300	300	300	300	300
-Rio Lindo	80	80	80	80	80	80	80	80
-Cañaveral	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5
-Nispero	23	23	23	23	23	23	23	23
<u>TOTAL</u>	511.5	517.5	565.5	565.5	565.5	613.5	613.5	653.5
<u>Peak demand</u>	417.5	419.7	431.1	443.6	461.3	486.9	515.1	545.2
<u>Surplus</u>	94	97.8	134.4	21.9	104.2	126.6	98.4	108.3

(average compound annual rate of growth of peak demand 1993-2000: 3.9%)

Source - ENEE

The new 50 MW Villanueva sub station supplies the industrial corridor in the immediate vicinity of the town, the Guanchias banana farms and a large area of Santa Bárbara. An explosion destroyed a transformer in early 1992, causing L1.5 to L2.0 mn of damage and cutting transmission capacity from 50 MW to 25 MW. However, the sub station should be back to full capacity by the end of 1992, and can carry the present demand level with only a slight overload until then.

(iii) The global supply-demand balance

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3.2 Telephones

i) Users' opinions

TABLE 6.6 USER OPINIONS ON THE TELEPHONE SERVICE

The number who expressed each opinion

G= good, B= bad, I= indifferent; H= high, L= low; Y= yes, N= no

	Quality			Cost			A problem	
	G	B	I	H	L	I	Y	N
EPZ owners (7)	5	2	0	1	1	6	2	5
EPZ users (10)	6	0	4	7	2	1	0	10
Non-EPZ exporters(3)	3	0	0	2	0	1	0	3

Two EPZ managers - the marketing manager of ZIP Búfalo, Tony Medina, and José Molina of ZIP Choloma - reported serious problems with the phone service. Sr. Medina depicted a continual struggle with HONDUTEL to get the extra lines he needed for new clients, and said that the position had not been significantly eased by the installation of a new exchange in Villanueva (see below), because it had released only 27 lines for use to the north of Villanueva. He hoped to negotiate with HONDUTEL the purchase of a new 1,000 number exchange. Sr. Molina said that the phone service was "very bad". They were waiting for a new exchange to be installed in Choloma. Calls were frequently cut off and lines were always busy.

However, the other EPZs had a more positive point of view. In the case of ZIP Continental, Patricia Rosenthal said HONDUTEL had responded to their needs by taking mobile phones to La Lima and was establishing a new exchange at La Lima. Each of her clients now had a phone line, she said. However, the central administration at ZIP Continental was still without a phone line when we visited the park in April. CHIP Choloma reported that the service had been poor but had improved; INHDELVA said there was no problem with the availability of lines or the quality of service; ZIP San Miguel said the service was good. ZIP Villanueva reported that the park had 15 lines and no problems, thanks to the new exchange opened in Villanueva this year.

Park users were generally positive about the quality of the phone service and negative about its cost - especially for international calls. Nevertheless, there were continuing concerns about line shortage, expressed particularly by FIDE officials whose concern is for future supply rather than the position of the firms already established in Honduras, who have largely managed to resolve their problems.

ii) Telephone supply to the EPZ:

As we saw above, in common with other users, the EPZs have experienced considerable difficulties with meeting their telephone needs, and not all of them are by any means satisfactorily resolved. The general setting is the lack of spare capacity in the phone

system in the Sula Valley; the lack of effective inter-institutional coordination; organizational problems within HONDUTEL and financial problems with the service's capital budget.

TABLE 6.7 NEW TELEPHONE EXCHANGES IN THE EPZ AREAS

EXCHANGE	COST (000 \$US)	LINE CAPACITY		FINANCING
		Initial	Final	
Villanueva	380.6	600	4,000	BCIE
La Lima	801.6	1,000	5,000	City Corp
Choloma	835.0	3,000	5,000	HONDUTEL
Búfalo	921.2	1,000	5,000	undecided
Puerto Cortés	4,489.2	5,000	20,000	undecided

In Choloma, the present capacity of the 15 year old exchange is 1,000 lines, and it has no tone dialing facility. Following a presidential intervention, HONDUTEL's capital budget was increased by the \$835,000 (approx. L.5mn) required to purchase a new AT&T digital system, which will have an eventual capacity of 5,000 lines. The system is mobile, so it can be used elsewhere in the future if Choloma outgrows it. According to HONDUTEL planners in Tegucigalpa, the exchange will be in service by September 1992; officials in San Pedro Sula said it would be operating in October. It was alleged that the agreement with AT&T had been ready to sign in December 1991, which would have allowed the exchange to be operational by April 1992. However, the signing actually took place in May 1992, and the exchange had sat for two months in Miami awaiting HONDUTEL's authorization to ship. But planners in Tegucigalpa insisted that the installation of the exchange was not behind the schedule outlined in their 1992 executive plans.

While the new exchange should resolve the problem of the quality of service to existing clients in the Choloma area, there is also a shortage of cables which will limit the use of the exchange to 3,000 lines in the first instance. Nevertheless, this is a big increase on the 718 lines served by the old exchange.

At Villanueva, HONDUTEL installed a new plant this year, with BCIE funding. It has 600 lines capacity, with expansion possible up to 4,000 lines. However, since HONDUTEL was apparently unaware of the EPZ development in the area (which did not feature in the Villanueva city plans they consulted in the planning procedure), the exchange is inappropriate for EPZ use. The technology is analogue (pulse dialing), appropriate only for an essentially rural telecommunications center. HONDUTEL planners in Tegucigalpa said they intend to replace the exchange by digital technology in 1993. Officials in San Pedro Sula were unaware of these plans.

At La Lima, the owners of ZIP Continental (the Rosenthal family) helped to organize the foreign exchange for the purchase of the new exchange, supplying a \$350,000 letter of credit. This exchange had been built by the end of April, but was still not functioning. Like the Choloma exchange, it is mobile, and has eventual capacity for up to 5,000 lines. In Búfalo, the financing for the proposed new exchange was still uncertain in mid 1992, but it seemed likely that the EPZ's owners would have to help provide the funds.

It is clear from this survey of the response of HONDUTEL to the needs of the EPZs that there is a general problem with advance planning of industrial developments' telecommunications needs. While it is true that HONDUTEL is a bureaucratic organization not easily able to resolve crises with appropriate urgency, it must also be said that other actors do not seem to have made its job easier. We could find no indication that either the park developers themselves, or the municipal authorities supposedly responsible for land use planning and for overseeing urban development, had either informed or consulted HONDUTEL about the likely communications needs of the EPZs. We noted that there is a new EPZ in an advanced stage of planning at Buenavista in Villanueva by the owners of ZIP Choloma; HONDUTEL officials in San Pedro Sula said they had had no request for telephone services yet.

iii) Global telephone supply

HONDUTEL has in hand a major global expansion program which should add 110,000 lines to the national network (an expansion not far short of 100%) in just three years; of these, 39,000 are destined for San Pedro Sula. There is some skepticism regarding the organization's capacity to manage such a big expansion in such a tight time scale. At present the rate of installation in San Pedro Sula is 25 lines a day, which implies that the planned expansion would take over 5 years. The target rate is 40.

Factors cited by senior officials as limiting HONDUTEL's effectiveness included the following:

- bureaucratic public sector administrative norms which result in slow responses to problems
- low levels of training for staff
- the absence of goal orientation in the organization's culture
- the predominance of a "public service" culture over a commercial culture, so that the capital budget is not allocated on rate of return criteria; this is linked to the fact that the organization's surpluses are creamed off as state (quasi fiscal) revenue, so there is little internal incentive to maximize returns.
- the residual character of the capital budget in the organization's financial structure when cuts have to be made, ongoing revenue commitments linked to direct HONDUTEL employment tend to get priority over expansion plans (contracts to suppliers don't involve direct HONDUTEL jobs).

It is possible that some of these problems will be addressed in the near future by a restructuring of HONDUTEL which could involve the privatization of some of its functions. While the official "line" is that there are not yet any defined policies on this question, we understand that there is a study underway looking at options, including general decentralization, and the privatization of the following functions:

- telephone gateways
- cellular telephones
- VISAT satellite phone services for data transfer
- development programs in general, via contracts

On this scenario, HONDUTEL would keep only the basic functions of administering and maintaining the network, supervising development contracts, and regulating the new functions. From the point of view of the EPZ sector and any other growth poles in the Honduran economy, the obvious advantage of this type of reform is that it would peel off the high technology, capital intensive development areas for private funding. Users who were prepared to pay rates adequate to support the necessary investments would then be able to expect quick and flexible responses to their needs.

3.3 Water and sewage in the EPZs

i) Users' opinions

All of the EPZs have their own independent water supply, and the cost is covered by the basic rent. No-one reported problems with supplying the present needs of users; concern about the quality of the service were related to the quality of the water itself, and only one user (Interfashions at ZIP Choloma) said this was a problem for them.

TABLE 6.8 USER OPINIONS ON THE WATER SERVICE

The number who expressed each opinion

G= good, B= bad, I= indifferent; Y= yes, N= no

	Quality			A problem?	
	G	B	I	Y	N
EPZ owners (7)	0	0	7	0	7
EPZ users (10)	3	2	5	1	9
Non-EPZ exporters (3)	1	0	2	0	3

ii) EPZs' water supply systems

The different EPZ locations have differing underground conditions which affect their capacity to pump water and also affect the likely impact their use of water resources on the surrounding community.

ZIP Villanueva has one well in place, but the park is built over low-yielding alluvial clays and the well is not very productive (50 gallons per minute- g.p.m.), so a second well was being prepared in June 1992. The local authority in Villanueva expressed concern that the EPZ's use of underground water would reduce the municipal system's pumping capacity, since they draw on the same ground water reserves, and their wells are deeper.

ZIP Búfalo is built over a higher yielding geology, and the park's well produces over 200 g.p.m. However, the quality of the water is poor, with conductivity of 900 to 1,000 microsiemens reflecting a high mineral presence, mainly of iron and manganese, which makes the water very "hard". ("Soft" water has conductivity of around 250). Other users in the area experience the same problems: TEXHONSA, which is opposite ZIP Búfalo,

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has to treat the water before using it for cloth treatments. The sugar factory, CAHSA, has a 1,000 g.p.m. well but it has extremely high conductivity of 1,000.

The Choloma river valley which runs through the center of Choloma city is well endowed with underground water reserves, and as a result the city center EPZs of ZIP Choloma, CHIP and INHDELVA have no volume supply problems. ZIP Choloma has an

enormous turbine pump well with 1,000 g.p.m. capacity, and a second well with 200 g.p.m. The underground reserve is located in a fan of highly permeable gravels, which have the added advantage of a low ratio of drawdown to output.² Conductivity at ZIP Choloma was 450, suggesting a higher quality of water than at ZIP Búfalo.

To the south of Choloma, conditions are more difficult. ZIP Galaxy and ZIP San Miguel, opposite the López Arrellano colony, are built over weathered granites where the characteristic water supply pattern is low quantity and high quality. ZIP Galaxy has three low yielding wells, with total output under 50 g.p.m. However, conductivity is a low 310. These conditions have also caused serious difficulties in satisfying the water needs of the López Arrellano colony (see Community water and sewage systems, below).

In La Lima, there is plentiful underground water, located in beds of gravel sandwiched between clays, and wells with 1,000 g.p.m. output are not uncommon. However, there is some groundwater pollution in the immediate vicinity of La Lima, and many of the drainage channels are very polluted. Conductivity levels in the area are in the range 500 to 750 - but it is not clear what proportion of this relates to pollution rather than to mineral conditions in the subsoil.

iii) EPZs' sewage systems

Only three of the seven EPZs we visited (ZIPs Choloma, San Miguel and Búfalo) said they treated or planned to treat their sewage before discharging it. There is a perfect correlation between the set of EPZs who treat their sewage, and the set which receives external funding conditioned on sewage treatment. ZIPs Búfalo and Choloma have funding from the IDB's Interamerican Investment Corporation, and ZIP San Miguel has money from the US government's Overseas Private Investment Corporation (see table 1.2 on page 6 above). In the case of ZIP Choloma, the IIC held up disbursements until the treatment plant had been completed. Other EPZs who have funds from USAID via FIDE, or are entirely self financed, have not installed oxidization plants.

Sewage treatment is a point of conflict between ZIP Villaunueva and the local authority. The EPZ has no treatment plant, and has connected its sewage system to the municipality's new collector without permission ("a la brava"). The city's mayor, Sr.

² "Drawdown" measures the fall in the level of water in the well. If the rock around a well is not very permeable, it takes a longer time for the well level to be restored by seepage from the surrounding water table. With permeable rocks, seepage happens quickly and high well output can be maintained without a rapid fall in the well's water level.

Guadalupe López, claims that the EPZ could within three years exhaust the capacity of the city's oxidization tanks (see Community water and sewage systems, below).

In Choloma, neither CHIP nor INHDELVA treats its sewage. Each is connected to the municipal system, which is 30 years old and gravely inadequate. There is no treatment before the effluents are discharged into the ground water systems downstream of the city, and nor is this a top priority for the municipality (see Community water and sewage systems, below). ZIP Galaxy to the south of Choloma discharges raw sewage directly into the Laguna del Carmen.

The policy lesson from this review of sewage arrangements seems to be quite clear: if there is a concern to avoid new industrial developments adding to groundwater pollution, conditioned funding is a good tool. However, it is also necessary to establish proper regulatory norms applicable to existing polluters; otherwise, the new developments will always be able to argue that they are being unfairly treated. For example, in the case of ZIP Búfalo, the EPZ's treatment plant will do nothing to tackle the problem of pollution from TEXHONSA across the road, which is resisting local authority pressure to clean up its act. One disturbing datum from our survey was that no EPZ owner or user said that sewage treatment was in any way a problem; however, officials at FIDE did regard it as a problem. Local authority regulatory powers related to industrial pollution will be strengthened by the General Law of the Environment presently under discussion.³

iv) Overall water supply and sewage conditions in the Sula Valley

There are approximately 700 to 750 wells in the Sula valley as a whole, including 130 run by the Tela Railroad Company and 70 run by the Division Municipal de Agua, DIMA, in the city of San Pedro Sula. DIMA has records on around 200 wells in the city itself; technicians in the Servicio de Agua y Alcantarillados Nacional (SAANA) estimate there could be 300 wells altogether in the city.

Organizations active in water supply and sewage development also include USAID, which has a program with communities and NGOs in the valley, and the IADB, which has a program with the San Pedro Sula municipality for sanitation in the eastern side of the city, within a \$50 mn Municipal Development loan. The IADB is also planning to fund a major flood and drainage control program for the valley as a whole (see below).

The coordination of water and sewage development is inadequate, according to experts. SAANA rarely uses its right to approve new systems as a lever to impose overall coherence on the systems. Water legislation in Honduras dates back to 1927, and stipulates that railroads are the first priority after human consumption: a fair measure of the case for an update in this near rail-free state.

³ See Chapter 5, Section 6.ii below for more discussion on this point.

3.4 Shipping, customs and port services to EPZs

i) Users' opinions

TABLE 6.9 USER OPINIONS ON THE SHIPPING SERVICES

The number who expressed each opinion

G= good, B= bad, I= indifferent; H= high, L= low; Y= yes, N= no

	Quality			Cost			A problem?		
	H	G	B	I	H	L	I	Y	N
EPZ owners (7)	2	0	5	3	0	4	0	7	
EPZ users (10)	6	1	3	4	2	4	0	10	
Non-EPZ exporters(3)	3	0	0	0	0	3	0	3	

Users of all kinds had positive opinions on the quality of shipping services out of Honduras; but there was also a consensus that prices were high. Several Asian firms complained that it could be more costly to ship a container from Puerto Cortés to the south coast of the USA than it was to ship it across the Pacific to California.

TABLE 6.10 USER OPINIONS ON THE NATIONAL PORT AUTHORITY'S SERVICES

The number who expressed each opinion

G= good, B= bad, I= indifferent; H= high, L= low; Y= yes, N= no

	Quality			Cost		A problem?		
	G	B	I	H	L	I	Y	N
EPZ owners (7)	0	0	7	1	0	6	0	7
EPZ users (10)	4	0	6	3	0	7	0	10
Non-EPZ exporters(3)	1	1	1	1	0	2	0	3

Most users were fairly indifferent about both the cost and quality of the National Port Enterprise's (NPE) services. The NPE runs Puerto Cortes' harbor facilities. This indifference could be explained by the fact that most users do not deal directly with the NPE; the shipping lines handle this for their customers. It also means that some element of the high cost felt by users in relation to the shippers might originate with NPE charges.

Customs are provided on site in the ZIPs but not in the Free Zone extension EPZs. Opinions on customs services (not shown in the tables) vary. The EPZ owners generally had a positive opinion: four said they were good and none, bad. Of those who said they were good, one was a free zone extension and three were ZIPs. However, these opinions were not necessarily shared by the users of the parks. While almost all were indifferent, the two who expressed a clear opinion were both negative - and both of these were in free zone extensions where there is no on site service.

ii) Shipping services available to the EPZs

"Maquila" exports are a new ingredient in the Honduran shipping business. The growth of the sector is indicated by Table 6.11, which shows that "807" cargoes carrying cloth pieces for assembly in Honduras from East Coast (Florida) ports grew 71% in 1990-91. From Gulf ports (New Orleans), they grew 43%. Northbound cargoes (the finished goods) grew respectively by 60% and 9%. Data for the East Coast ports for the first quarter of 1992 confirm the same trend, when compared with the first quarter of 1990.

TABLE 6.11 807 CARGOES BETWEEN HONDURAS AND THE USA, 1990-92

	All "807" Cargoes- No. of containers or trucks			
	EAST COAST SOUTHBD.	NORTHBD.	GULF PORTS SOUTHBD.	NORTHBD.
1990	917	1,014	138	187
1991	1,565	1,624	107	203
Percent increase	71%	60%	43%	9%
First quarter 1991	280	353		
First Quarter 1992	557	580		
Percent increase	99%	64%		

Note: "807" refers to the section of the Caribbean Basin Recovery Act with that number, which provides for duty free re-entry into the USA of goods assembled in the Caribbean Basin from inputs manufactured in the USA. A very large proportion of Honduran free zone manufacturing is covered by this section.

Source: Crowley Caribbean Transport (CCT)

In mid 1991, there was over a boat a day running from Puerto Cortés to Miami, and available to EPZ producers; this frequency is important to the stockholding efficiency of maquila operations, and explains why none of our interviewees among the EPZ community identified shipping frequency as a problem.

The EPZ trade has become an important part of the Honduran shipping business - especially on east coast routes, where they account for 23% of southbound and 19% of northbound volume (Table 6.12). For the Gulf Coast trade (not shown in the table), maquila is much less important, accounting for only 4% of imports and 12% of exports in 1991. It is notable that "807" is relatively more important in southbound shipping than in northbound - in spite of the fact that the northbound "807" cargo is greater in absolute terms. Historically, southbound ships have tended to run emptier than northbound ships due to the higher volume-weight ratios of Honduran exports compared with imports. Thus, the development of the maquila industry has gone some way to mop up the relative excess capacity in import shipping space.

TABLE 6.12 "807" SHARES OF HONDURAN SHIPPING VOLUMES, 1991

	SOUTHBOUND	US EAST COAST:	NORTHBOUND
"807"	23	Melon/Watermelon	28
Foodstuffs	6	"807"	19
Paper and board	7	Meat	4
Agriculture		Wood	12
& Accessories	7	Coffee	12
Used cloth	3	Seafoods	3
Hardware	8	Vegetables	7
Tires	5	Tobacco	3
Appliances	6	Other	12
Other	36		

Note: these figures exclude banana company boats, which is why bananas do not appear; the figures for other products also exclude the part shipped by the banana companies

Source: CCT

There is ample excess shipping capacity, making it unlikely that the EPZ sector will be constrained by this factor. Industry spokesmen estimated excess capacity at 40% in June 1992; a detailed study of capacity utilization was to be commissioned by the Central American Liner Association (CALA) in the second part of 1992. If this figure is right, and with other shipping demand stable⁴, the maquila industry could triple from 1992 levels before hitting shipping capacity constraints.

⁴ Although melon shipments have grown from 445 containers in 1985/86 to 2,999 in 1990/91 - an average compound annual growth rate of 46% - this is expected to slow, and there is no other part of the market which is expected to grow rapidly in the coming period.

iii) Shipping prices and industrial organization

As we noted in section i) above, the main grouse of users is not the quality or quantity of shipping services, but the cost. The industry is partially organized into a cartel on a Central American level - the Central American Liner Association, CALA. In Honduras, CALA has three members, who account for 70% of the East Coast market: Seaboard Marine (40%), CCT (22%) and Sealand (8%). For the Gulf Coast, where Seaboard Marine is not active, the CALA market shares are Sealand (40%) and CCT (18%) - a total of 58%.

It is unclear whether these shares are high enough for CALA to be able to set uncompetitive rates. There is always a scattering of non-CALA operators keen to undercut them. According to CALA spokesmen, there has been a sharp increase in competition, due in large part to the growing volume of the "807" trade over the last two years, which has attracted new operators into the market.

In June 1992, independents competing on the Miami routes included Empresa Naviera Santa, K. Ocean, Concorde Line, Nexos, and Tropical Shipping. In addition, banana company boats carry other merchandise to fill spare capacity, especially on the southbound run. In the first half of 1992, a 40 foot container of apparel products from Puerto Cortés to Miami cost between \$2,155 and \$2,205 with the CALA lines, while Concorde Line was charging \$1,865 (FIDE, 1992). However, the latter was reported to be about to stop running to Miami.

CALA claims that average tariffs have been eroded by 40% over two years in dollar terms, due to growing competition. However, "807" cargo prices have not fallen significantly. They explained this by the growing demand in the sector ("their demand is growing so they have to pay") - but they also cite the high value-weight ratio attached to the products. Shippers apparently set prices in part in relation to their conception of customers' capacity to pay, conceived in relation to the value of the product. This could only continue with some degree of (implicit or explicit) collusion among shippers.

CALA explains the high relative cost of shipping between Puerto Cortés and Miami, compared with the trans-Pacific routes, by the size of ships and the related scale economies. The boats operating out of Puerto Cortés normally have a 120-150 container capacity, appropriate to the 50 hour run to Miami. For the Pacific crossing, huge freighters holding from 1,000 to 2,000 containers are feasible.

iv) Puerto Cortés - cost and quality

There has been much criticism of the charges levied by the NPE on users of Puerto Cortés. Shippers have argued that the port is 40% more expensive for container traffic than the Guatemalan port, Santo Tomás Castillo, just six hours' sailing down the coast.

According to the shippers, the problem arose with the NPE's treatment of currency devaluation in 1990. In December of that year, the NPE decided to dollarize its charges, using the official exchange rate of 2 lempiras to the dollar for the conversion. In March 1990, most international transactions in Honduras had been switched to an interbank rate which stood at 5.30 at the end of 1990. The result of the dollarization was a 160% rise in the dollar cost of using the port's facilities. However, the lempira tariff had previously been unchanged for 10 years, during which time the NPE's real incomes must have been considerably eroded by inflation.

There is little argument about the quality of facilities at Puerto Cortés. The water is deep, the wharves are good, the bay is secure, the port is not congested and there are adequate numbers of cranes and other necessary handling equipment - though the maintenance of the latter leaves something to be desired. On the down side, according to shippers, there is a strong union, which helps to keep costs high, and the speed of loading and unloading is not as fast as it might be. They have argued for the privatization of the loading process and of the billing and administration side of the NPE.

3.5 Road infrastructure in the EPZ area

i) Users' opinions

User opinions on the road situation were too uniform to merit a table to report them. Everyone said the present situation was difficult, because the old road network of the San Pedro Sula area is inadequate, and because there is added disruption from the major works which began in 1992. However, everyone also agreed that, with the completion of a new network establishing four lane dual carriageways from Villanueva to San Pedro Sula, from San Pedro Sula to Puerto Cortés and from San Pedro Sula to El Progreso, the road problem will have been resolved.

ii) Road program underway in 1992 in the Sula Valley

The upgrade of the San Pedro-Puerto Cortés stretch was underway in the first half of 1992, and is scheduled for completion by the end of 1992. This project, costing approximately \$40 mn, is funded via the BCIE by Mexico, using funds arising from the San José pact, which channels a portion of oil revenues paid by Central America back into development finance on soft terms.

The remainder of the Sula Valley road network improvements are being funded under a \$150 mn four year IADB-SECOPT road network program which also began implementation in 1992. The IADB itself is supplying \$110 mn, including an element of over \$13 mn built into the loan to cover the financial costs of the same. The first year's program included both the stretch from San Pedro Sula to El Progreso and that from Potrerillos (south of Villanueva) to Chamelecón (the limit of the existing San Pedro Sula ring road); the contract for the first of these was let to an Argentinean construction firm

in May 1992. The plans for Potrerillos-Chamelecón have been upgraded to a four lane road in recognition of the importance of the EPZ developments in the zone.

A separate \$50 mn IADB loan to the San Pedro Sula municipal government agreed in 1991 also has a road component: it provides for a new eastern ring road linking the El Progreso Road to the southern highway. Finally, the IADB is also funding the upgrading of the El Progreso-Tela road under a previous loan.

All the SECOPT road program is now subjected to a social cost-benefit analysis, in which estimates are made of the benefits to different classes of users from reduced damage and maintenance costs on their vehicles, and time saved. These benefits are then set against the costs of the project and an "internal rate of return" is calculated. According to this methodology, the IRR of the San Pedro Sula - El Progreso upgrade will be 34.3% ; that of the Puerto Cortés stretch, 20.4% ; and that of the Chamelecón - Potrerillos stretch, 35.3% . As a result, each project shows a positive "net present value" when social costs and benefits are discounted at a 12% interest rate; respectively, of L.286 mn ; L.195 mn and L.65 mn.

In general terms, the private sector is estimated to be a net gainer from the SECOPT road programs, while the public sector loses due to the privatization of maintenance operations. Within the private sector, an estimated 26% of the benefits will go to low income groups (users of public transport and workers on labor intensive rural road schemes), while the rest goes to higher income groups (IADB 1991a: 56). There can be little doubt that, in the case of the Sula Valley trunk road improvements, both the owners and users of the EPZs will benefit from reduced transport times and costs, while the workforce should also benefit by reduced travel to work times.

CHAPTER 4 - LABOR MARKET SERVICES

As we saw in Chapter 2 above, most concerns for the future success of the EPZs were related to the labor market. This is hardly surprising given the centrality of cheap labor to the logic of export processing activities. Many were worried about the availability of labor with adequate skills at a low enough cost. The other fears were unionization and to a lesser degree - the inflexibilities imposed by the Labor Code.

We reviewed the general labor supply situation in Part 2, Chapter 4 above, where we saw that the projected growth of EPZ employment was very large in relation to the identifiable reserves of young female labor in the valley. We predicted rising labor costs and growing immigration to the Valley as a result, and recommended that future EPZ development be shifted to areas with bigger labor surpluses - especially, Tegucigalpa.

In the present section, we look in more detail at the different public services and functions which bear on the labor market conditions facing the EPZs. The section starts with training services, then looks at worker transport, social security, and labor market regulations.

4.1 Training services and the EPZ sector

i) EPZ use of training services

In our survey of EPZ owners and users, no fewer than seven of the seventeen interviewed said there was a shortage of technicians and qualified supervisors. FIDE officials said that the shortage of qualified mechanics was the single most important labor bottleneck. Five respondents also said there was a shortage of machine operatives. Four said they thought that active piracy of trained labor had already become a problem. It is clear that the training of the EPZ labor force at all levels, but especially for technicians and supervisors, is an important factor affecting the sector's future potential.

ii) Training services available to the EPZs

There are two important Honduran institutions involved in industrial training: the state run Instituto Nacional de Formación Profesional (INFOP); and the private Centro Asesor para el Desarrollo de Recursos Humanos (CADERH), which has been financed by USAID over several years, and is now in the process of becoming self financing. The Programa de Asignaciones Familiares (PRAF), part of the social compensation strategy run out of the Presidency of the Republic, also has a training program for women, which started in 1991.

TABLE 6.13 EPZ USE OF TRAINING SERVICES

	The number in our sample who:		
	Pay for INFOP	Use INFOP	Use CADERH
EPZ owners (7)	7	1	2
EPZ users (10)	10	0	1
Non-EPZ exporters(3)	3	1	1

CADERH

CADERH is a private non profit organization set up with USAID support in 1984 to develop technical assistance for centers dedicated to vocational technical training. Its initial concentration was on metal working, cabinet making, carpentry and soldering. However, some four years ago it branched out into the new area of industrial training, where the object of its activities became the needs of firms rather than of individuals. It offered studies of the firm's business opportunities and of the goals and values within the company's culture, producing recommendations for strategies to achieve possible desirable outcomes.

These programs were developed in the wood, foundry and textile confection sectors, with support of needs assessment specialists from the Universities of Minnesota and Ohio. The contract between USAID and CADERH to finance this work specified that subject organizations should have export potential.

CADERH's textile confection training program

In the textile confection sector, it became quickly apparent that the needs of nationally owned and foreign companies were different. Local firms interested in moving into export business had spent many years with a captive local market where high margins could coexist with high inefficiency. The level of technification of the industrial processes was very low. In contrast, foreign firms locating in the export processing zones brought with them the modern management culture of industrial engineering. While they brought their own engineers from the US, they were also looking for trained people who had some understanding of those techniques. A second need was for mechanics able to maintain textile machinery.

CADERH decided to develop a program geared to overall support in the administration of textile confection plants, and contracted the specialist US company, Kurt Salmon, to help them develop such a program, using USAID funds to pay the bill. Two industrial engineers are already fully trained, and by January 1993, a total of six will be available to train client company staff in the following areas:

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- (a) Administration of the production process:
 - efficiency measurement, work methods, production standards, incentive systems, cost measurement and control, quality control and plant layout.
- (b) Supervision
- (c) Instruction of machine operators

CADERH offers a six month program to train operatives and instructors, in the ratio 10 to one. Time is split roughly 80-20 between the shop floor and the classroom, underlining the emphasis on hands-on training. It uses the Advanced Analytical Method of Training (AAMT), which has been standard in the USA since the second world war. Each task is broken into component parts and exercises are developed to improve each component.

The development of the worker is then measured against a standard training/efficiency curve. This allows the company to identify at an early stage which of a trial group of operatives are likely to be able to make the grade. It is normal for only 50% of trainees to go through to the second week's training; after that, only 7% of the survivors will normally drop out.

Results from the program underway on Euromoda's "Levi" line underline the effectiveness of the Salmon methodology. At the start of the program, the line had reached a plateau of 47% efficiency and 102% excess costs - levels quite normal for national producers. By May 1992 the program got these, respectively, up to 62% and down to 37%.

At June 1992, CADERH had completed two programs - at the Van Heusen/Kattán joint venture, PROTEXA, in the INHDELVA park, and at Nicholas Chahín's INTERMODA. Three further programs were well underway, at Sr. Chahín's Euromoda, at the Kattán family's Exportex in INHDELVA, and at a new plant in Tegucigalpa owned by the Bendeck family, operating under the drawback legislation, CONISA. Two further programs were just beginning: at the factory of US company M.Fine in ZIP Búfalo, and at the Honduran owned AAA, operating in Choloma under the Free Zone laws.

The full cost of the CADERH program is L.14,500 a week (L.350,000 for a 24 week program). Converted into dollars, this compares very favorably with the rates charged by Salmons themselves in the USA: \$2,600 a week, against \$8,500. To date, the cost to clients of CADERH's program has been subsidized by USAID funds, to the tune of 50%. However, these funds were scheduled to run out at June 1992; CADERH has resources for two more subsidized programs, which were earmarked for two new initiatives of the Kattán family in the INHDELVA park. The price to users will be raised later in the year. The program was running at full capacity in June 1992, and had had to turn down some requests for support. It had trained 5,161 workers up to the start of October 1992, according to USAID officials.

While it is likely that foreign companies will be prepared to pay full cost prices for this sort of program, recognizing the good value they represent on an international comparison of prices, local firms are less likely to do so. While in most cases the costs are quickly covered by cost savings which result from it, for a new company, training investment represents a financial cost at the worst possible moment of its cash flow, and there is inevitably some uncertainty attached to the future cost savings as other factors can undermine the success of training programs. This raises the possibility that the government and development agencies should look to establish a program for medium term financing for suitable training programs for national companies gearing up to export, coupled to a campaign to proselytize the results of programs to date.

USAID was considering a new program with CADERH for 1994/5 which would provide funds for CADERH to establish expertise in other areas, using the same sort of methodology as it applied in its work with Salmons in the textile confection field. INFOP could also be a beneficiary of this program, as could the private university, UNITEC.

The USAID training fund

Apart from its support to the maquila sector's training needs through CADERH, there is a separate USAID program which can fund up to 30% of the training costs of firms establishing in Honduras. The fund is conceived as a competitive element in the struggle to attract new firms to the country. CADERH has coordinated with FIDE to identify appropriate firms to receive support from the program. The central criteria is to target companies whose location in Honduras might represent a breakthrough in some part of the export processing market. Hanes, Choloma was given support as a market leader in apparel.

Given the importance that Honduras now try to move beyond apparel, the recent interest of US Shoe in setting up a 1,500 worker plant in a Sula Valley EPZ has also merited priority attention, and the company will be given \$90,000 towards an \$800,000 training program. CADERH's own engineers will participate in the training program to learn the appropriate techniques for future use. The hope is that once a major footwear company has set up in Honduras, other important companies like Reebok and Nike will consider locating here. Similarly, the prospect that United Technology Automotive (UTA) might set up a 2,500 worker Honduran plant for the assembly of wiring harnesses would represent a breakthrough into electronics, and as such could expect to get support from the USAID training fund.

The training fund also serves as a commentary by USAID in the debate about the appropriate functions of the state training institute INFOP. As we will see in the following section, INFOP has proved reluctant to make financial support available to subsidize companies' own training activities.

INFOP

INFOP is financed by a payroll tax of one percent, which is obligatory. Our questionnaire of EPZ users confirmed that they uniformly pay their contributions - and almost

uniformly do not receive any service in return. The one EPZ which reported a definite intention to use INFOP was ZIP San Miguel, whose owner, Roberto Larios, has a positive experience of INFOP training in his metal manufacturing enterprise, INMSA. However, he had not yet spoken to INFOP about the available services for the EPZ when we interviewed him in May 1992. Two EPZs and one user in our sample reported an intention to use the services of CADERH.

The Institute confirmed that the EPZ firms contribute the 1% payroll tax. The number of export processing firms inscribed in INFOP in Choloma totals 31; in Villanueva, 2; in Búfalo, 3 and in La Lima, 7.⁵ INFOP's Director, Carlos Lorenzana, says that the Institute is, in return, attempting to gear itself to the needs of the EPZ sector. This is part of a general turn towards the growth sectors in the economy. Other prioritized areas include food production, agroindustry and tourism.

INFOP is in the process of establishing a school in cutting and sewing machine operation in San Pedro Sula, where supervisors, mechanics and high productivity operatives will be trained. INFOP in San Pedro Sula told us that two mechanics had been sent for six months to Taiwan to specialize in sewing machine maintenance. INFOP is investing L.200,000 in the expansion of the building for the school, and will install L.1 mn of machinery. The school, which will begin work at the start of 1993, will be able to receive two groups of 25 students at a time, and plans to run 2 month courses. It expects to train 240 people a year - a rather small number compared with the present and probable future scale of the sector's training needs.

However, INFOP also has a new program of on-site training, under which it will supply staff to firms' own training units. One company in Choloma - Exportex - already has a program to train operatives, mechanics and supervisors, and INFOP has supplied two trainers. INFOP is also suggested that where companies have special training needs, INFOP staff could be specially trained to give the service the company needs - although this scenario provokes the inevitable question: who trains the trainers?

However, Sr. Lorenzana stopped short of suggesting that the Institute might be prepared simply to finance the training activities of companies where it is unable to supply suitable staff. In mid 1992, this issue arose when a US electronics company interested in establishing a wire harness assembly plant in Central America visited Honduras, and wanted to see what state subsidies might be available for its own training program.

In fact, article 25 of INFOP's constitution allows it to waive a company's contributions against the cost of in-house training - but in practice this has not been done. The Institute has always concentrated narrowly on funding its own training activities. However, it has now reportedly developed a mechanism to evaluate claims for "in house" training in EPZs, so things may change on this front.

⁵ These figures sum to 44, which is slightly more firms than are actually installed in the EPZs in these areas (38). The difference is likely to be due to the inclusion of export companies outside EPZs in the INFOP data. Nevertheless, the numbers confirm our general perception that the maquila sector pays its INFOP contributions.

A serious problem faced by INFOP is the low level of salaries it pays its staff. It will find it impossible to hold on to staff really equipped to train effectively in the EPZ sector if it can pay them only L.2,000 a month - which is the salary level of the two technicians at present being trained in Taiwan, according to the Institute's San Pedro Sula director. CADERH pays specialist engineers working in this field over L.5,000 (see below). But a move to a more flexible, labor market related salary system in the Institute would require a major shift from the traditional culture of the nineteen year old organization.

It is possible that this sort of change will become possible following constitutional changes, at present being prepared for Congressional consideration towards the end of 1992, which will establish a private sector majority on the INFOP board for the first time. This reform has been promoted by USAID and Honduran private sector organizations for several years. The private sector provides over 85% of INFOP's L.23 mn annual income. The Institute, which plans to double its budget to some L.50 mn in 1993, is hoping for an increase in the payroll tax to 1.5% as the *quid pro quo* for ceding a private sector majority on the board.

Nevertheless, the scale of the task of transforming INFOP into an effective, private sector oriented training body should not be underestimated. One USAID official we spoke to suggested that the best way to start might be to use a year's budget to pay off all the existing staff, and begin again with a clean sheet.

One obligatory question regarding INFOP's proposed turn towards training for the EPZ sector is that of inter-institutional coordination. The question arises because FIDE, which has worked closely with CADERH in developing a specialized training program for the EPZ sector, was apparently unaware of the INFOP initiative when we interviewed San Pedro Sula officials in April 1992. It is an old criticism of the Institute that it concentrates on its own direct training programs, and has never fulfilled its statutory mandate to establish a national technical-vocational training system in which the efforts of all relevant organizations are appropriately coordinated (USAID 1984: 8). In the next section we review the efforts of CADERH in the EPZ field.

PRAF's occupational training program

In 1991, PRAF began a pilot training program for women, intended to give them a way out of permanent dependence on social compensation programs. There are currently 9,000 women on the program, which is mainly concentrated in the poor rural areas. The type of training was chosen with a view to the possibilities of the local labor market.

In Villanueva, there is a PRAF training school in cutting and sewing in Villanueva. The municipality has provided the physical space and coordinates the project; PRAF supplied the sewing machines and pays the trainers, who are women with previous training experience in the industry, recruited by the municipality. The three trainers are paid L.500 a month for working half time. The cost of the program to June 1992 was L.60,000. To qualify to enter the scheme a woman must be receiving the Mother Head of Family bond (see section X.x. below) and there must be a minimum of five family members. There were initially 135 women on the 4 month course, and 74 finished.

PRAF officials said that the choice of cutting and sewing for the program in Villanueva was due to the women's demand, which is likely to be related to hopes for employment in the EPZs. The majority of the graduates of the first course now work in the EPZs, according to program officials. However, some aspects of the program suggest that it is not fully geared to the EPZ sector. Some 35% of the group was over 30 years old, and several were over 40. It is unlikely that these women will easily get work in the EPZs in Villanueva at present, although this could change in the future. Childcare was also reported as an obstacle to getting work. PRAF is now planning short courses to specialise some of the graduates in quilting and making pillows; the trainers were sent to Tegucigalpa to learn these skills and pass them on to the students in Villanueva. These are artisanal, not industrial, skills.

4.2 Workplace nurseries and the EPZs

We found no workplace preschool childcare facilities in EPZ companies. However, interest in this type of facility should grow in proportion to the difficulty of attracting and retaining labor. In Costa Rica, where the EPZ sector has confronted labor supply tensions for some three years in the central metropolitan area around San José, new EPZ developments have begun to include childcare provision as part of the package offered to client firms - for example, at the Metropolitan Free Zone.

As we reported in Section 2, over half the EPZ's female workforce are mothers, and over half the mothers are single parents. This suggests that workplace childcare might help to attract labor. Managers at Hanes Choloma reported recently that in 1991 they had labor turnover of 32%, and attributed most of this to the problems of childcare (CADERH, 1992: 6). USAID did a pilot project for a workplace nursery project in San Pedro Sula in a textile plant at Parque Integrado No. 2 in Barrio Cabañas, run by the Kattán family, in the 1980s. The project used a modified "Montessori" methodology, and was considered successful by program officers. Unfortunately, there was no funding available to continue after the pilot was completed.

Nevertheless, follow up studies on the children who passed through the school also demonstrated that their primary school performance was significantly better than other children's. This suggests that properly organized workplace nurseries might at once help ease labor market tensions in the EPZs, and make a real long term contribution to Honduras' human resource development. We would therefore recommend that development agencies consider the possibility of funding this type of initiative.

4.3 Worker transport and the EPZs

(i) *EPZ sector opinions on worker transport*

As we saw in Section 2, 65% of EPZ workers travel to work by bus, while a further 30% travel by foot. The quality of bus services is therefore an important factor in the efficiency of the sector, affecting the workers' reliable arrival at work on time and also determining the effective recruiting range. In our survey of EPZ sector opinions on service quality, we found that few believed that the existing bus services were adequate.

and four of the seven parks owners/managers we interviewed have a bus service of their own to overcome deficiencies in the public service. This phenomenon is not limited to the EPZ sector; many large employers in the area run a bus service of their own.

None of our interviewees used the rail system for any purpose - but there was a remarkable consensus among the EPZ owners to the effect that it could be refurbished as a mass worker transport system to take pressure of the bus services.

TABLE 6.14 EPZ SECTOR'S OPINIONS ON WORKER TRANSPORT

The number who expressed each opinion
G= good, B= bad, I= indifferent; Y= yes, N= no

	Quality of service:			Sufficient buses available?		Do they have their own buses?
	G	B	I	Y	N	Y
EPZ owners (7)	1	1	5	1	2	4
EPZ users (10)	1	1	8	0	1	1
Non-EPZ exporters(3)	0	0	3	0	0	0

(ii) ZIP Choloma's travel to work pattern

Table 6.15 shows the pattern of travel to work for employees at ZIP Choloma in November 1991. The most striking feature of the table is the high concentration of employees living in the immediate vicinity of the park. Sixty five per cent lived either in Choloma itself, in the López Arellano colony, or between the two; these areas are within ten minutes by bus and half an hour by foot from the park. The only major concentration of employees beyond the immediate vicinity of the park is to be found in San Pedro Sula (24%).

These figures underline the failure of the public transport system to unify the Sula Valley area as a single travel to work zone. It is likely that most of the employees who travel from beyond San Pedro to Choloma are professional staff who travel in private cars. The same impression is confirmed by our interviews with personnel staff in all the EPZs, who place a heavy premium on local residence in their selection procedures.⁶ The opposite side of the same coin is that EPZ location decisions are heavily influenced by local labor supply considerations. The large concentrations of underemployed working class population in and around Choloma attracted the cluster of EPZs to the that zone; the large worker population of Chamelecón in south east San Pedro Sula plays a similar role in relation to ZIP Búfalo.

⁶ If applicants give false local addresses in order to get work, it is possible that this distorts to some extent the reported pattern of residence.

(iii) *Bus services in the Sula Valley*

The bus service in the Sula Valley area - like almost all Honduran bus services - depends on second hand vehicles, imported from the USA at a cost of approximately L.80,000 to L.100,000 each. This is about 10% of the cost of a new unit. Both Venezuela and México have offered new buses with long term funding - but the monthly financial cost would still turn out at L.8,000 or more - well above the cost of second hand buses.

The DGT makes physical checks of all vehicles arriving in Honduras, and insists that they be newer than the vehicle they are replacing. However, the effectiveness of DGT regulation of bus safety and of the environmental impact of exhaust pollution is doubtful. For instance, there is a regulation which insists on vertical exhaust pipes to reduce the pavement-level pollution, but the owners believe they reduce mechanical efficiency and the order is widely ignored. In any case, the main problem is the lack of mechanics who understand diesel injection pumps, which leads to the emission of unburned vapor by badly adjusted vehicles. There might be space for an "appropriate technology" development project dealing with repairs to such pumps.

TABLE 6.15 ZIP CHOLOMA WORKFORCE BY AREA OF RESIDENCE
NOVEMBER 1991

<u>Residential area</u>	<u>No of workers</u>
Between El Progreso and San Pedro Sula	69
Between Potrerillos and San Pedro Sula	66
Between Naco and San Pedro Sula	4
San Pedro Sula	968
* Between San Pedro Sula and Choloma	767
Choloma	1,902
Between Puerto Cortés and Choloma	236
Puerto Cortés	41
TOTAL	4,053

* includes 559 in the López Arellano colony and 152 from between the López Arellano and Choloma city center

Source: Gerencia de Recursos Humanos, ZIP Choloma

South from San Pedro Sula

There are 46 buses operating on the route from Potrerillos/ Pimienta to San Pedro Sula, which passes through Villanueva and Búfalo. The companies working the route are TALI, CITEL, Guzmán and Transportes Cuellar. The number of buses has been stable over the last five years. In addition, the route carries the long distance services from San Pedro Sula to Tegucigalpa and the south. In the opinion of the Dirección General de Transportes (DGT) in San Pedro Sula, this route has sufficient buses to meet current demand. However, there is a shortage of transport on the minor roads linking nearby

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villages and towns such as Los Planes, San Manuel and Santiago to the main highway. To meet this need, DGT recently authorized the operation of six pick-ups, whose main rationale is to carry workers to the EPZs in the Villanueva/ Búfalo area. Prices for this corridor (single journey) are reported as follows (June 1992):

SPS - Búfalo	L.1.00
SPS - Villanueva	L.1.50
Búfalo - Villanueva	L.1.00

South east from San Pedro Sula

Three major companies work the routes from San Pedro Sula to La Lima and El Progreso: TUXSA, CITY and CATISA. They operate 110 buses between them - and the number has been stable over the last three years. These services all send a portion of their buses past ZIP Continental in La Lima. In addition, the route from the town of San Manuel through La Lima (passing ZIP Continental) to San Pedro Sula is covered by the company TIMSA, which operates 17 buses. Once again, the DGT believes that the present level of service is adequate to meet demand. Prices for this corridor (single journey) are reported as follows (June 1992):

SPS - La Lima	L.1.20
SPS - El Progreso	L.2.20
La Lima - El Progreso	L.1.20

North from San Pedro Sula

In Choloma itself there is a local bus service with 13 units, 8 run by ETUCH and 5 by Transportes Urbanos Cholomeños, which receives a subsidy under the national system of support to urban bus services, and charges the regulation 30 centavos per journey.

There are four companies operating interurban services on the highway to the north of San Pedro Sula. Empresa de Transportes Cholomeños runs from San Pedro to Choloma, and has grown from under 30 buses five years ago to 49 in June 1992. CITUL (26 buses), IMPALA (22 buses) and Norteños (4 buses), all run from San Pedro to Puerto Cortés, and all have had stable numbers over recent years. These latter services tend to run full, but when they have space they will pick up local passengers in the Choloma area. Prices for this corridor (single journey) are reported as follows (June 1992):

SPS - Choloma	L.1.00
SPS - López Arellano	L.0.40
López Arellano - Choloma	L.0.50

DGT considers that there is an insufficient service on this corridor, and has given permits to six private bus owners to work on contract to companies in the area requiring worker transport. These permits were issued in the first half of 1992.

The capacity shortage is concentrated in the morning and evening "rush hours"; the general problem is to tackle peak hour shortages without unduly increasing unused off

peak capacity. The obvious way of doing this is to have a marginal cost pricing system which offers reduced off peak rates in order to reduce peak hour demand. This would require a radical change in industrial organisation - including ticketing. However, given the nature of the ownership and organization of the bus service, coupled with the political sensitivity of bus prices, sophisticated pricing systems seem a remote prospect. Another possible solution would be to stagger working hours in factories in order to spread peak hour demand over a longer window.

San Pedro Sula city services

There has been a growth of some 50% over ten years in the number of urban buses in the city, in line with population growth, which is running at over 5 per cent a year. There were over 380 subsidized buses operating in the city in June 1992, charging the statutory fare of 30 centavos per journey. However, none of these buses reaches any of the EPZ sites, all of which lie beyond the city boundaries

(iv) Rail services for worker transport

Background

The Honduran railroad system is separated into three sections: the corridor from Potrerillos to Puerto Cortés (the National Railway of the Sula Valley); a valley bottom system leased to the Tela Railroad company, and the La Ceiba sector. It would hardly be an exaggeration to say that - with the possible exception of the part leased to the Tela Railroad Company - the system is in a parlous state.

A 1992 report by a German consultant recommended the closure of the La Ceiba sector, which has been made inviable by Standard Fruit Company's decision to ship its bananas by road container to Puerto Castilla. It also recommended serious consideration of closure of the part of the Sula Valley line which runs from San Pedro Sula north through Choloma to Baracoa. Freight for Puerto Cortés would instead be shipped on the Tela Railroad Company section, by agreement with the lessee (Gheriani, 1992).

Apart from the very poor physical state of the system ("a very advanced state of deterioration" for the lines; "terrible" for the sleepers), the same report identified weaknesses in the administration of the railway, including the absence of any marketing strategy, the absence of any cost measurement system on which pricing and marketing decisions might be based, and a heavy overhang of administrative costs, including growing pension obligations and medical charges for employees and ex-employees.

In the Sula Valley sector, which is the part of possible interest from the point of view of the EPZs, the volume of traffic fell 40% over the decade of the eighties as a result of its declining ability to compete with road container transport. In 1990, the sector moved 264,000 tonnes of freight; 53% was exports (almost all bananas or wood); 38% was high volume imports (the biggest single element being wheat imported under PL 480), and the rest was commercial freight. The sector's total operating income of L.3.8 mn covered just 45% of its costs.

The rail passenger transport service

The rolling stock of the Sula Valley sector includes three "ferrobuses" for passenger transport, but passenger transport is a near-insignificant part of the existing business of the Ferrocarril Nacional. It produces revenues of L.25,000 a month in the Sula Valley sector- just 4.7% of total income. With fares averaging L.1.00, this suggests a total of some 1,000 journeys a day. The scheduled services June 1992 were as follows⁷:

SPS - Choloma: Leaves SPS at 5 am and 5 pm and leaves Choloma at 6 am and 6 pm. Fare: L.0.50 each way. Calls at Rio Blanco, Los Castaños, Fesitranh, López Arrellano, Trincheros, La Mora/Zona Libre, and Choloma. The run is an hour each way; capacity for 100 passengers.

Búfalo - Azucarero Hondureño - San Pedro Sula:

Leaves Búfalo 6 am; arrives SPS 6.45. Calls at Villas del Rio, Nuevo Chamelecón, Col. Panting, Medina and the FNC Taller.

SPS - Puerto Cortés:

This train is a continuation of the above. Leaves SPS 7 am; arr. Puerto Cortés 9.30 am. Fare L.2.00 (half the bus fare for the same journey). Carries around 100 passengers.

In addition, there is an irregular service from Baracoa to Puerto Cortés, which takes workers into the Free Zone there.

A regional metro?

Notwithstanding this dismal scenario, as we commented in section (i) above, there is a growing consensus in the EPZ sector that the railway system might be the answer to the area's worker transportation needs. The system runs close to all the major industrial parks, and it requires little imagination to see that it could be transformed into a regional metro which would render the whole of the triangle Choloma-Villanueva-El Progreso a single travel to work area. Short of that, the potential may exist for a north-south shuttle service between San Pedro Sula and Choloma, and San Pedro Sula and Villanueva, respectively.

At present, the passenger transport service is financially inviable, and the Gheriani report mentioned above recommended that it be wound up if the government would not agree a subsidy. However, it also mentioned another alternative: that the Ferrocarril might "semi privatize" the passenger service to allow it to respond to the needs to the EPZs. The suggestion appears to be that a leasing arrangement (similar to that with the

⁷ However, when we visited the Ferrocarril Nacional in June 1992, only one "ferrobus" was operational - so at least one of the listed services must have seen suspended.

Tela Railroad Company) be established with a private company, which would then run a commercial passenger transport system on the Ferrocarril's lines (Gheriani, 1992: 25). During 1992, there have been exploratory discussions along these lines between the Ferrocarril and the CCIC. The proposal would involve the construction of a second line from San Pedro Sula to Choloma to allow two way traffic, and the purchase or leasing of suitable passenger transport units.

According to senior management at the Ferrocarril, an extra line through from Villanueva to Choloma could be installed for approximately L.10 mn, including L.5 mn for the purchase of sleepers. The cost is relatively low because the Ferrocarril has stocks of rails which could be used.⁸ A rough estimate of the cost of new rolling stock - three new "ferrobuses" - is L.30 mn., bringing the total lempira investment to approximately L.40 mn.

Back-of-the-envelope calculations taking the gross financing cost as 10% (i.e. supposing some element of concessionary funding⁹), and limiting financial expenses to 50% of total revenues, suggest that the project might be viable if it could generate L.14 mn a year in revenues. Supposing a standard one-way fare of L.1.50, such a project might be viable with around 9,000 workers travelling each way daily¹⁰. To generate this level of demand from the EPZ sector alone would require over half the present EPZ workforce to shift to the train, which seems a high figure. Nevertheless, the project is worthy of more detailed study, for various reasons:

First, because present demand need not be restricted to EPZ workers: it would include workers of all sorts in the industrial corridor, and commuters towards San Pedro Sula from the surrounding communities.

Second, because potential demand will certainly grow in the future. ZIP Búfalo alone estimates that up to 6,000 workers from the park (60% of the projected total employment there) would use a train service to travel to work if it were available, and the park's management has approached the Ferrocarril Nacional to investigate the possibility of putting a spur line into the park, with a station.

⁸ This presupposes that the existing route of the line through the centre of San Pedro Sula is the most appropriate; it could be argued that it would be better to follow a more easterly route running through the working class "barrios" - in which case the construction costs would be higher. To put it the line right through to Puerto Cortés would also be much more costly - about \$6 mn - due to the large number of bridges on the stretch to the north of Choloma.

⁹ Managers at the Ferrocarril said that the Spanish Government was prepared to finance the sale of "ferrobuses" over 20 years at 3%, with a two year grace period. That suggests a gross financing cost of 8.5% a year after the grace period.

¹⁰ The calculation is as follows: total lempira capital outlay = L.40 mn. With gross financing costs at 10%, annual interest plus amortization is L.4 mn. Restricting this to 50% of total revenues produces a required revenue of L.8.0 mn. Assuming 300 working days a year and a daily two-way fare per worker of L.3, this produces a required number of two-way passengers of 8,888 a day.

Third, because there are positive externalities (social benefits) to be had by shifting from polluting buses to electric trains, which would justify an element of public subsidy. One form this might take is direct subsidy to the construction costs of the new lines, using resources from the Honduran Social Investment Fund, which could be justified by the job creation element in the investment. In addition, the capacity of a modern electric train service to move passengers quicker and more comfortably than buses would probably justify higher average fares per journey than we have supposed in the above exercise. We therefore recommend that a detailed feasibility study be done on the establishment of a modern passenger transport system using the railway network of the San Pedro Sula area.¹¹

4.4 Social security, workers' rights and the EPZs

(i) *EPZ opinions on labor market regulations*

Employment conditions in the EPZs are regulated by Honduras' Labor Code, and there are no exceptions to the code for the EPZs. In the course of our study, we repeatedly encountered employers and EPZ owners who cited some aspect of the labor market among their primary concerns for the future of their business (see Chapter 2 above). A large number picked out the fear of unionization, while several others mentioned aspects of inflexibility and cost related to the existing legal mechanisms for labor market regulation. In the present section, we provide a brief description of the existing rules and comment on the extent to which they appear to be observed, and the extent to which they appear to be appropriate.

(ii) *Social security and sickness*

Background

EPZ employers must be inscribed in the social security system of the Instituto Hondureño de Seguridad Social (IHSS). The IHSS has two basic classes of insurance. *Long term* insurance covers disablement, old age and death (known as "IVM" for the Spanish initials: ivalidéz, viejéz y muerte), which funds a retirement pension in the range 50% to 80% of the salary on which the worker's IHSS contribution is calculated. In the case of early retirement for disablement, it pays 40% of the projected retirement pension. *Short term* insurance covers medical attention for sickness and maternity for the insured worker, maternity benefits only for the worker's partner, and medical care for children up to the age of five. This regime is known as "EM" for the Spanish initials of Enfermedad y Maternidad. Sickness benefits are paid at 66% of basic salary from the fourth day of illness. The whole salary for the first three days, and 34% thereafter, must be paid by the employer. Where workers do not have EM cover, the employer becomes liable to pay the sickness benefits which would otherwise be picked up by the IHSS.

¹¹ One possible source of finance for the project would be the development of 22 manzanas of land owned by the railway in Trincheras, between Choloma and the López Arellano colony. The National Railway has a draft plan to put 4 industrial units for rent, 225 housing lots of over 300 v² each, and a centralized maintenance shop on the site. This would, in turn, release other sites presently used for maintenance.

The IVM regime is the statutory minimum, charged at 1% of salary to the worker, plus 2% in employers' contributions. Where EM operates, the respective contribution rates are 3.5% and 7%. These rates have been payable only up to a ceiling of L.600 a month salary, which had not been revised for 30 years until 1992. As a result, the IHSS has been affected by inverse fiscal drag during the inflation of recent years. Another result has been the erosion of the value of retirement benefits, since the maximum rate payable is 80% of the L.600 a month ceiling.

The establishment of an EM regime is a matter of negotiation between the local employers and the IHSS. Where the latter is able to offer the required level of services, it will pressure the employers to agree to upgrade the class of cover. There is normally a period of optative upgrading, before the EM system becomes obligatory. The latter step would be preceded by some sort of collective negotiation ("concertation" is the Spanish term; it is untranslatable into English).

The IHSS is now attempting to resolve its near-insolvency by revisions to the contribution system, based principally on increases in the ceiling. But at the same time it is expanding and trying to improve its health services - particularly through the development of workplace clinics in the Company Medical System ("SME" - Sistema Médico de Empresa), and through better coordination with Ministry of Public Health services.

IHSS regimes in the EPZ areas

In Villanueva, it has been obligatory for firms to enlist in the EM system since 1989. In Choloma, EM became available in January 1991 but is still not obligatory. The IHSS subcontracts a private clinic in Choloma to deal with the health needs of the insured short of hospitalization, and pays it 88% of the income for health insurance. In La Lima, EM is not available. In addition, all the EPZs have the option of entering the SME, wherever they are located. In June 1992, ZIP Choloma and ZIP San Miguel were operating the SME; ZIPs Villanueva and Búfalo were operating EM; all the other EPZs were operating IVM.

The Company Medical System in the EPZs

The SME is an important new IHSS initiative. It is IHSS policy to establish the SME in all the EPZs. As we noted above, in June 1992, only two parks were already operating the system: ZIP Choloma and ZIP San Miguel. However, two others - ZIP Búfalo and ZIP Continental - said during our survey that they planned to introduce SME; INHDELVA said it was considering it.

The basic concept of SME is to shift "level two" medical attention to a workplace IHSS clinic. Workers only need to go into the main IHSS hospital - "level four" - if the doctor on site decides to refer them - and then they are given an appointment. For the employer, this has the advantage that it permits a medical decision on a worker's sickness claim without a day's work automatically being lost in the trip to the IHSS hospital in San Pedro Sula. Where SME is operating, the rate of referrals to hospital is

reckoned by the IHSS to be as low as three percent of cases seen by the workplace doctor. The percentage of worker absence for sickness is also well below IHSS norms: between five and seven percent, compared with over 10% for the IHSS as a whole.¹²

SME also builds in some standard features of the "new model" IHSS system which is being promoted generally throughout the country. First, the contribution ceiling is raised. Two options are available on contribution calculation for the SME:

- Rates at 4.5% and 7%, for employee and employer respectively, on a ceiling of L.2,000
- Rates of 3.5% and 7% on a ceiling of L.1,500

These rates represent a significant increase in IHSS costs for both workers and employers, compared with the IVM regime on the old ceiling (1% and 2% of L.600 for workers and employers respectively), which is also still an option in the Choloma area. The company's costs are reckoned to rise by approximately 400 per cent with SME.

However, apart from the savings on work time lost from fraudulent sickness, there is also an offsetting saving to be made on private medical cover. All EPZ firms on the IVM system in our sample found it necessary to contract a company doctor to give first level care on site, and to keep a check on certifications of illness provided to workers by private doctors. Even then, companies often find that the Ministry of Labor will uphold the certification of illness by a private doctor against the opinion of their own private doctor, because Ministry officials do not have the discretion to overrule any qualified doctor's certification of illness. Having an IHSS clinic on site cuts through this problem. In addition, if the worker is incapacitated the IHSS picks up the tab.

Under SME, as under the "new model" generally, coverage is extended to include first level medical care for the insured's partner (including dental care), and the age limit for children's medical attention is raised by two years each year until it reaches 12. Finally, there is a program of health education in the workplace. Occupational health programs have significantly reduced injury at work - cutting the rate of accident related sickness from nine to one percent in one ZIP Choloma factory.

Family planning programs and the EPZs

Statistics for ZIP Choloma from the IHSS reproductive health program suggest that the pregnancy rate among women of childbearing age was 4% in June 1992 - up from 2.5% six months earlier. This is regarded as too high (3% would be the maximum acceptable). Particularly disturbing is the rising tendency - which is likely to be related to the increased possibility of social intercourse that comes with an income. Given that the

¹² These data were quoted by Dr. Benjamín Mena, Director of the IHSS in San Pedro Sula, in an interview in June 1992. They are broadly consistent with data we have for the SME at ZIP Choloma for October 1991, which show that 4.5% of all cases of illness were referred to specialists at the IHSS hospital, and 95.5% were dealt with by the SME doctor on site. The proportion of the workforce incapacitated by sickness (daily average) was 5.5% - down from 9.2% just four months earlier.

Labor Code provides for paid pregnancy leave, the economic cost of pregnancy to a worker (in terms of lost earnings during confinement) is not very high, once she has passed the 60 day threshold which qualifies her for this right.

There are two agencies active in family planning in the EPZ sector: the Asociación Hondureña de Planificación Familiar, ASHONPLAFA, and the IHSS. ASHONPLAFA begun EPZ oriented work in 1990, and presently has contraceptive distribution posts staffed by nurses in three EPZ factories: Monty and Hanes in ZIP Choloma and MAINTA (Osh Kosh B'Gosh) in INHDELVA. The contraceptives, which are donated to ASHONPLAFA by USAID, are sold at subsidized prices. A standing charge of \$90 a month is made to the company. ASHONPLAFA also has an education program. However, ASHONPLAFA's San Pedro Sula director, Sr. Roberto López, alleged that his programs have been undermined by a competing IHSS service, also using USAID resources. The IHSS gives away contraceptives free.

Sr. López has visited 10 other factories but says that employer consciousness about the possible gains from effective family planning programs in their factories is low. This may in part be related to the early phase of development of most factories: the first priority is to get the production process running smoothly. Nevertheless, there would seem to be scope for publicizing among EPZ managers of the economic results of Mexican family planning programs in the maquila sector, as reported by a delegation of USAID officers and Honduran family planners from the IHSS and ASHONPLAFA to the Mexican maquila sector in November 1991. ASHONPLAFA's Mexican analogue, FEMAP (Federación Mexicana de Asociaciones de Planificación Familiar) runs an integrated service for maquila companies, from diagnosis to implementation and evaluation of results, charging a lump sum. The program claims spectacular results in higher productivity, lower staff turnover and training costs, reduced absenteeism and reduced costs for maternity leave (see below) and medical care.

The IHSS runs a family planning education program in the EPZs under the umbrella of the SME. These programs have a health risk slant, and aim in particular to reduce the under 21 fertility rate. The results of our EPZ worker survey reported in Part one of the present study underline the relevance of this work: 20% of our female worker sample thought that the ages 15-19 was the best time to start a family (Table 5.7 above). The justification for channeling IHSS resources into family planning is clear, in terms of reduced costs to the Institute. The November 1991 delegation heard from the Mexican Social Security Institute (IMSS) that every dollar spent on family planning services is estimated to generate \$14.50 in savings on services to pregnant women.

In ZIP Choloma, IHSS family planning services, which include free contraceptives, are centralized in the IHSS clinic. USAID officers would favor the establishment of distribution posts for pills and condoms in every EPZ factory. The IHSS receives USAID donated contraceptives indirectly, via the Ministry of Public Health (MSP), under the "Sector de Salud II" program. The IUD and sterilization are considered the two most effective methods of family planning. However, there is no on-site facility for IUD insertion in the ZIP Choloma clinic. This service is available at the IHSS "level three" clinic in Choloma, but USAID Human Resources Development officials would like to

see one established on site. The latest quarterly figure for IUD insertions in EPZ workers at the IHSS' Choloma city clinic was 21 - against a daily target of 15. Our own survey showed that only 4% of women said they were using the IUD (Table 5.3 above).

There is obviously a need for the IHSS and ASHONPLAFA to agree a division of labor on family planning in the EPZs. The two clear areas of work are the medical prescription and provision of contraceptives, and the maintenance of educational programs designed to increase demand for the former. The report of the November 1991 Mexico delegation suggested that IHSS should specialize in the clinical aspect while ASHONPLAFA should concentrate on selling educational packages to companies. However, there is also much to be said for an organic link between clinical and educational services.

Either way, it would make sense to sort out some arrangement quickly, to enable an institutionally well defined program to be established from the start when SME is set up in the other EPZs. There are monthly coordination meetings in San Pedro Sula between IHSS, MEP, ASHONPLAFA and USAID on the population programs for the San Pedro Sula area (Region 3 of the MSP) where this problem could be broached.

(iii) Minimum wages and workers' rights

Minimum wages

Honduran labor legislation stipulates a minimum wage, which varies by sector. Export industries generally have the highest minimum wage. In May 1992, this stood at L.16.70 per day. When a worker has a 100% attendance record, the daily rate is payable on a 7 day basis for a 5½ day (44 hour) working week, putting the weekly minimum wage at L.116.90 and the monthly (30 day) minimum at L.501.¹³ In addition, workers have the right to 21 days paid holiday (including statutory holidays) and a Christmas bonus of a month's salary. Added together, these factors mean that the real minimum wage per day worked is some 48% above the quoted daily rate, at L.24.70.¹⁴

On top of this must be added social security (which varies up to 7% according to the regime applicable in the workplace - see above) and the 1% contribution to INFOP. These factors bring the "fully loaded" hourly labor cost to a maximum of 60 per cent above the quoted statutory minimum, at L.3.34 in May 1992 - a dollar rate of 60 cents an hour¹⁵, at the free market exchange rate of 5.55 lempiras to the dollar effective in May 1992.

¹³ In June 1992, there was a rise of 13.7%, taking the minimum to L.18.99 a day, a monthly rate of L.570.

¹⁴ The worker is paid for 56 weeks a year on a seven day basis, giving a total of 392 days, but works 52 weeks for 5½ days, less 21 days holiday - a total of 265 days. So she is paid for 48% more time than she works (392/265 = 1.48).

¹⁵ In June 1992 this rose to L.3.80 an hour, or 67 dollar cents, at the exchange rate of 5.65 lempiras to the dollar.

The Labor Code entitles workers to paid maternity leave for 42 days before and 42 days after the birth. Employers routinely require negative pregnancy tests before allowing women workers to pass the 60 day employment threshold which gives them this right. Where a worker is covered by the IHSS regimes of EM or SME, the bill is picked up by the IHSS; otherwise, as in the case of sickness benefits, the employer must pay.

There is no evidence of employer evasion either of the minimum wage or of regulations on standard working hours and holidays in the EPZ sector. Many factories have shut-downs for holiday time. A study by the Ministry of Labor in April 1992 found that the EPZ employers pay at or above the minimum (Secretaria de Estado en los Despachos de Trabajo y Previsión Social, 1992: 11).

In the course of our study, we encountered some concern among EPZ owners that the minimum wage (when fully loaded) was too high, and might be undermining labor cost competitiveness when compared with other Central American countries. However, as we saw above, average earnings in the EPZ sector are considerably above the statutory minimum, at L.671 compared with L.501 a month.¹⁶ At first sight, this suggests that the minimum wage is not a constraint on labor demand in the EPZ sector.

However, the main reason that earnings exceed the statutory minimum is that most companies operate bonus systems which top up the basic wage, or use piecework systems¹⁷. We found no company which said it paid simply the minimum wage. Since workers automatically receive the minimum wage, it requires an effort-related bonus to move them towards optimum productivity levels. As a result, the minimum wage operates as a floor to the wage structure, and companies will normally have to pay a mark-up to get acceptable productivity levels, regardless of supply and demand conditions in the labor market. Obviously, the tighter the market, the higher the mark up will tend to be, and vice versa. Nevertheless, under these conditions, an increase in the minimum wage would certainly lead to "cost push" throughout the sector, and could deflect marginal investors away from Honduras.

Whatever the importance of the minimum wage in pushing up wages, there are also signs of excess demand for trained labor, which makes it easy for workers to move to other jobs for better pay, once they have been trained by their first employer. In the absence of any collective agreement among firms either to share training costs or not to "pirate" trained workers from one another, there is inevitably a danger of companies trying to "free ride" on the back of neighboring companies' training efforts.

However, the following table shows very different labor turnover rates in the two EPZs for which data are available: 50% a year in ZIP Choloma and over 100% in ZIP

¹⁶ FIDE calculated an even higher average wage of L.749 in the first quarter of 1992 (FIDE, 1992).

¹⁷ However, the employer must pay the statutory minimum whatever the output performance of the worker.

Continental.¹⁸ Labor turnover at the level of firms is also very varied. What is more, turnover is lower in Choloma, which is supposed to have most labor shortage problems than La Lima. This suggests that turnover rates are related to factors other than trained labor shortage, and that companies can retain the workers they have trained if they follow appropriate personnel policies.

It is notable that all the firms in ZIP Continental are Asian owned. It is probable that many Asian firms are still at quite a low point on a learning curve for Honduran labor relations, relative to Honduran and US companies. This could be reflected both in less effective recruitment procedures and less sensitive shop floor relationships, resulting in more labor retention problems and higher turnover rates (see Treatment of workers, below). We found one Korean firm in INHDELVA which reported 200% turnover per year. The manager blamed piracy by other companies of workers he had trained over two to three months: "this is just a school," he said.

TABLE 6.16 LABOR TURNOVER IN TWO EPZs

Employer:	Period	Recruitment:		Turnover 100(a÷b-1)	Annualized Turnover
		a) Gross	b) Net		
ZIP Choloma	1.90-11.91	9,782	4,932	98%	51%
ZIP Contin.	7.91- 3.92	2,735	1,592	72%	108%

In both ZIP Choloma and ZIP Continental, personnel managers emphasized that the great majority of workers who leave do so voluntarily: high turnover does not reflect the instability of demand for EPZ labor. In the case of ZIP Continental, a large proportion of turnover was ascribed to young women returning to full time study after the Christmas vacations; monthly data are consistent with this conclusion, as are the data for the age of employees reported in section 3 above, which showed that ZIP Continental had a younger than average workforce.

Labor ministry regulation

In our survey of EPZ users, we found more concern about the institutional procedures of the labor market than we did about the cost of labor. In particular, we found several factory managers who believed that there was an observable change in attitudes among some workers, once they had passed the 60 day period required to acquire rights against unfair dismissal. Managers suggested that some workers deliberately sought dismissal in order to claim "prestaciones laborales" (legally mandated severance pay). Managers tended to assume that Labor Ministry inspectors would automatically side with the workers in these circumstances.

¹⁸ However, the latter's data refer to a shorter period nearer the beginning of the firms' operations, so they are not strictly comparable with the ZIP Choloma figures.

However, officials in the Labor Ministry in San Pedro Sula did not give us the impression that they were gunning for the EPZ employers. Although they had no statistics available, they reported that they had investigated some ten worker complaints in EPZ firms in 1992 - which is hardly suggestive of a major problem, given the scale of employment in the sector.

The Labor Ministry officials said the EPZ sector was not noticeably different from other employers in its treatment of workers. However, they believed that there was some problem with cultural differences between Asian employers and Honduran workers, who shrink at the former's authoritarian style: "We've met with Korean employers to try to explain to them that their supervisors should not shout at the workers". Most firms employ Honduran personnel managers in an effort to bridge such gaps; some EPZs also have Honduran labor resources managers who (among other functions) trouble-shoot conflict situations and aim to promote norms which avoid them in the first place.¹⁹

Unionization

The Honduran Labor Code specifies that wherever a group of 30 workers wishes to form a union, the company must recognize their organization. The code has been criticized for not relating the minimum number to the size of the firm. In fact, there is to date a very low incidence of unionization in the EPZs. This is hardly surprising, given the recent establishment of the factories. We found only one plant in our sample with a union, WARNACO in ZIP Villanueva, and in this case, the company had itself promoted the formation of the union in order to establish a stable institutional framework for labor relations. WARNACO's plant in the older state run Puerto Cortés Free Zone (which is outside the scope of the present study) is also unionized - in common with most plants in that zone.

As reported in Part Three, Chapter 2, we found that many EPZ owners and companies are strongly opposed to unionization. This is confirmed by a Labor Ministry report, which stated that some EPZ firms would pull out immediately if a union were established, while 80% said they would only accept one if 100% of workers voted in a union ballot, which is not what the Labor Code requires (Secretario de Estado en los Despachos de Trabajo y Previsión Social, 1992: 16). However, it is also clear that this does not arise from a desire to evade legal norms on terms and conditions of employment. We found no evidence of EPZ employer evasion of either the minimum wage or of labor market regulations related to working hours, holidays, social security, etc.²⁰

Rather, nervousness about unionization is related to a fear on the part of some EPZ owners and employers that factories would lose flexibility in their production processes if

¹⁹ ZIPs Continental, Choloma, San Miguel and Búfalo offer a labor recruitment service to users, run by a human resources manager.

²⁰ On pay, see part two, Table 2.14 and the associated commentary; on pay and conditions and social security, see the foregoing parts of the present section.

they had collective agreements. The maquila industry is very competitive, and firms need to be able to meet contract deadlines without the risk that production may be disrupted. As a result, a willingness to work overtime at short notice is an important factor in worker selection. As we saw in Part Two, there is a very high willingness to work more hours among the EPZ workforce (see table 2.12 and the foregoing discussion).

Nevertheless, Honduran law makes compulsory overtime working illegal, and some companies fear that a union might use this to achieve very high overtime rates, using the threat of delaying completion of contracts. More generally, they fear that the combination of tight delivery deadlines with effective shop-floor worker organization adds up to a vulnerable negotiating position for the company. Other employers who were concerned about unions mentioned the fear their company might become entangled in protracted meetings and negotiations involving the Labor Ministry and regulated by the Labor Code, wasting valuable executive time.

In practice, employers who wish to prevent unionization can often do so by the simple expedient of dismissing the workers concerned and paying them their legally mandated severance pay ("prestaciones laborales"). While Honduran law makes it illegal to fire a worker for organizing or belonging to a trade union, any worker who accepts severance pay on leaving a job (whatever the reason for leaving) has no further legal claim against the company. Legally, the acceptance of severance pay means the labor contract has been severed by mutual agreement. It is quite normal for Honduran workers who might have a good legal claim against an ex-employer to accept their severance pay and call it a day. Often, a Labor Ministry inspector would witness the agreement and help to calculate the amounts due (which depend on the length of employment). This is true in all sectors, not just the EPZs.

Labor Ministry officials in San Pedro Sula told us that they had received only one contested formal proposal to establish a union in the EPZ sector: at Best Form in ZIP Choloma, in 1991. On that occasion, the organizers left, accepting their severance pay. However, the Labor Ministry in Tegucigalpa reported that Monty in ZIP Choloma had also fired a group of workers who proposed to form a union; it did not say whether severance pay had been paid.²¹ It concluded that "this is perhaps the most sensitive issue in the maquila industries" (Secretaria de Estado etc, 1992: 16).

²¹ The report also mentions a similar recent case at Mandarin Knit Garments in the Puerto Cortés Free Zone, which is outside the scope of the present study. As noted above, this state-run zone, which has been operating for over a decade, is largely unionized.

CHAPTER 5 - COMMUNITY INFRASTRUCTURES IN THE EPZ AREAS

In the foregoing sections, we reviewed the social and economic infrastructures which serve the EPZs directly. We turn now to the social infrastructures in the communities of Choloma, Villanueva, and La Lima²². According to data on indicators of relative poverty prepared by SECPLAN, the three municipalities where the EPZs are based all feature in the top 20 municipalities in the country (out of 292). La Lima is the most prosperous municipality; Choloma is 12th; and Villanueva 19th.²³ Nevertheless, as we saw above, the inadequacy of social conditions is a concern of many EPZ users and owners.

We deal in turn with water and sewage, housing, education, health and social compensation programs. Finally, we discuss the relationship between the EPZs and the local authorities which have responsibility for both regulating the development process from a land use standpoint, and for supplying a number of the community services directly.

5.1 Community water supplies and sewage systems

(i) *Choloma*

In our survey of the Choloma community, we found that water supply was overwhelmingly the main priority of improvement. According to the 1988 census, of the 11,537 occupied dwellings in the municipality, 8,608 had a water service of some sort, and 2,772 had a sewage disposal system. The urban area had 7,081 dwellings. In 1991, the municipality agreed to take over systems installed in the López Arellano colony by SAANA, and in La Mora colony by Financiera Sula. This increased the proportion of urban dwellings supplied by the municipality from 45% to 79%. There are problems both with the old system of the municipality, whose pumping systems are 16 years old and have been inadequately maintained, and with the newly transferred systems, which had not been put systematically into good order before the hand over (ICMA, 1991a:33).

In 1992, the municipality negotiated a L.5.0 mn loan to tackle the most urgent problems in the city of Choloma (the "casco urbano") itself²⁴. Of this, L.1.8 mn will be spent on pumping stations, L.1.2 mn on pipelines to local distribution tanks, and L.1.7 mn on tanks.

The water supply for the López Arellano colony to the south of the city is very problematic, and has given rise to political conflicts between the local "patronato" and

²² This is not to suggest that these are the only communities from which the EPZ workforces are recruited; for instance, ZIP Búfalo recruits principally from the SE of San Pedro Sula (the Chamelecón area).

²³ The poverty ordering by municipality was prepared by the project: SECPLAN/OIT/FNUAP/PNUD- Políticas y programas de población, pobreza y empleo.

²⁴ The funds are from BANMA (L.2.34 mn), SAANA (L.1.00 mn), FHIS (L.0.5 mn) and USAID (L.1.2 mn)

the municipality over the last year. As discussed above (Section 3.3), the city of Choloma is built over a fan of gravels with plentiful groundwater, but the López Arellano is built over weathered granites which are not a good source of water.

Four years ago, SAANA sank two wells in the center of the city and installed a 5km aqueduct to carry the water south to the López Arellano. However, initially only one pumping station was installed. When the system was handed over to the municipality in March 1991, an estimated L.100,000 of investment was needed to bring it up to scratch. The second pumping station has now been installed. However, although the wells have, respectively, capacity for 580 and 420 gallons per minute (GPM), the design of the pipe system which carries the water to the colony prevents them providing the 1,000 GPM flow suggested by the sum of the two capacities.

The mayor of Choloma reported in June 1992 that the total flow to the López Arellano was just 390 GPM, which could meet only 50% of the colony's demand even working full time. He believed the best solution would be to drill another well. In the López Arellano itself, there is a FHIS project using L.1.25 mn of German funds to build a 90,000 gallon storage tank and a distribution network with household connections. The project's success is obviously predicated on a solution to the colony's primary supply problem.

The sewage system of Choloma city is 30 years old, has been expanded in a haphazard way, and is extremely deteriorated. It reaches approximately 50% of the dwellings in the casco urbano (ICMA, 1991a: 34). The provisional connection of two EPZs - CHIP and INHDELVA - to the municipal system added to demand and increased the urgency of improvements. Over the last two years, works have begun to improve the situation. Over L.2 mn has been invested in changing pipes and constructing new collectors. When the improvements are completed, the two EPZs will be given a permanent connection. All the sewage collected by the system is emitted untreated into the swamp lands to the east of the city. Likewise, the untreated sewage of the López Arellano colony finds its way into the Laguna El Carmen to the east.

At present, the municipality's first priority is to tackle the system within the city. In 1992 it plans to tackle the northern section of the city center, at a cost of L.1.2 mn. After that, come the colonies to the north of the river Choloma. Only then will the question of a treatment plant come to the top of the agenda.

(ii) Villanueva

There are just over 3,000 customers connected to the city of Villanueva's municipal water system, and few city households are not covered. The water is pumped out of the ground into hillside distribution tanks. As we reported in Chapter 3.3, the aquifers in the area are not very productive. The service is maintained for 8 to 12 hours a day, and pressures tend to be low. The mayor of Villanueva expressed concern that the sinking of new wells in the proximity of the city by ZIP Villanueva could further reduce the available supply for the municipal system.

In the 1988 census, only 499 households in the whole of the municipality of Villanueva had a sewage system; the great majority used latrines. The system in the city area is undergoing a major upgrade which will increase its coverage from three to seven neighborhoods, with partial coverage for a further six (ICMA 1991b: 37). In addition, four oxidization tanks were built during 1990-91, and four more are programmed. A new system of pipes and collectors will carry sewage to the tanks. The total cost of the project is L.3.5 mn, and the IADB is putting up L.1 mn through BANMA. As we reported in Chapter 3.3 above, the unauthorized connection of ZIP Villanueva to the system has been a source of conflict.

(iii) La Lima

As befits the country's most prosperous municipality, La Lima has a much better general situation for both water and sewage collection than either Choloma or Villanueva. Some 90% of dwellings in the city have piped drinking water, and 75% of the city is covered by sewage collection pipes. There are various different systems in the different areas of the city, some run by the municipality and others by the National Housing Institute, (INVA), by SANAA and by the Tela Railroad Company. However, none of the systems treats sewage before discharging it into the local river system, and adding to the chemical pollution from intensive banana cultivation.

5.2 Housing

(i) EPZ sector opinion on housing need

We found considerable concern among the owners and users of the EPZs about the housing situation. No less than half of the people we interviewed identified housing as a problem - and one third put it among their main concerns. It is obvious that there would be support in the sector for effective policies to tackle the area's housing deficits; however, it is also clear that there is no consensus as to what that might mean in practice.

(ii) The EPZs and FOSOVI

Only one of the EPZ owners - Ing. Robert Larios of ZIP San Miguel - said he was considering promoting the Fondo Social de la Vivienda (FOSOVI) to his clients. FOSOVI began operation this year and is funded by a compulsory 3% payroll tax, half payable by employers and half by workers. The FOSOVI law exempts the EPZs from compulsory contribution to the fund. None of the factory managers we spoke to was interested in subscribing.

We encountered some ambivalence about FOSOVI in our discussions with the CCIC and its members. On the one hand, industrialists whose operations are located outside the EPZs apparently felt that it was inequitable that EPZ clients should be exempt from the

payroll tax.²⁵ On the other hand, there was clearly widespread skepticism about the relevance of FOSovi to the sector's housing problems.

This skepticism is shared by USAID officers working on housing and municipal development. The Agency views FOSovi as an initiative primarily motivated by the construction industry to finance the supply of housing, and focussed on the building process itself. This contrasts with strategies based on the provision of building lots with basic services installed, which leave the construction to the owners once the lot has been purchased. Such programs have proved most effective in tackling low income housing needs in recent years. One example is the Fondo para la Vivienda Popular (FOVIPO) in San Pedro Sula (see below).

There is no subsidy element in FOSovi's main program: it will depend entirely on the contributions of workers and employers. It is therefore most unlikely that finished houses can be produced at prices affordable to EPZ workers. A study carried out for USAID suggested that perhaps 10% to 15% of FOSovi's subscribers would have high enough incomes to get access to FOSovi's houses.²⁶ Although FOSovi is also supposed to have a low income housing program financed by the Venezuelan government, there is skepticism as to what price of housing this will deliver in practice as the proposal involves the construction of dwelling units by Venezuelan construction companies.

For these reasons, USAID is not supporting the FOSovi initiative, preferring to channel resources available for housing into municipal upgrading - such as the Choloma water project discussed above. The Agency may also be interested in supporting more programs to produce building lots with basic services installed, such as FOVIPO.²⁷

(iii) FOVIPO as a model for low cost housing

FOVIPO is a joint private sector-public sector housing initiative set up in 1989 by the municipality of San Pedro Sula together with La Metropolitana savings and loans association, which is part of the Continental Group, and is the only project of its sort in Central America. La Metropolitana, which manages the program, subscribed 53% of the initial capital of L.19.8 mn. The municipality's 47% was provided by USAID, on a similar basis to funds for the Fondo de la Vivienda (FOVI), which is a Central Bank rediscount line geared to low cost housing.

²⁵ There is an issue here about who benefits from the subsidy involved in the tax exemption. The EPZs are not the only location option for export processing: the temporary introduction, or drawback, legislation provides another option. Therefore, the tax exemptions available only to industrialists who locate in EPZs can be expected to be reflected in differential rents for EPZ sites compared with non-EPZ sites. To the extent that this happens, the main beneficiaries are the site owners, not the site's users.

²⁶ We have not seen this study, which is confidential; the figure was quoted to us in an interview with Sr. Mario Pita of USAID's Housing and Municipal Development office.

²⁷ USAID has a \$25 mn housing program, on which \$22 mn has already been disbursed. \$13 mn went for housing finance via saving and loan associations in FOVIPO and FOVI. Of \$12 mn earmarked for urban upgrading schemes like the Choloma water system mentioned above, just under L.6 mn is still available.

The central aim of FOVIPO is to make it attractive for landowners to sell land for low cost housing development by facilitating the "lotificación" - the process of securing planning consent and installing the necessary basic infrastructure of roads, water, sewage and electricity. Once this has been done, the value of land is increased. The quid-pro-quo is that the landowner must finance the purchase to the purchaser (not to FOVIPO) over nine years. This requirement is the main obstacle to securing land: most landowners want cash "up front". The cost of the urbanization is covered by FOVIPO, and is also financed over nine years to the purchaser. The interest rate varies with market conditions, but retains a significant element of subsidy compared with market rates. In June 1992 it stood at 16% to the final user - compared with 19% on FOVI loans. The funds provided to FOVIPO via the Municipality of San Pedro Sula still cost only 12.24%. It is these cheap funds which allow FOVIPO to make loans at below market rates.

An urbanized lot of 184 V² (roughly 13 X 10 meters; 1 V² = 0.7 m²) cost L.10,000 in June 1992. This was some 40% up on the price of L.7,000 when FOVIPO started in 1989. Roughly 80% of the total cost is for the urbanization; the rest is the price of the land. These figures suggest repayments (capital plus interest) of about L.1,900 a year - or L.160 pcm - over nine years.²⁸ This is well within reach for a family with one member earning the minimum wage in the EPZ sector. The rule of thumb used by La Metropolitana to judge ability to pay is one third of gross family income. The sale is simplified by using a contract of intention of sale, linked to letters of credit, rather than mortgaging the individual lot. When the loan is paid off, the formal transaction of the land is made. The purchaser can begin his own construction once 25% of the capital has been paid off.

By the end of 1992, FOVIPO will have completed 3,500 lots, and it should meet its target of 5,000 during 1993, by which time the initial fund will be virtually exhausted. La Metropolitana studied a proposal for a similar initiative in La Ceiba, but decided not to proceed as it felt that the L.1 mn offered by USAID was insufficient. USAID shelter policy has moved away from the provision of subsidised credit, as has that of the Government of Honduras, whose rediscount lines for housing are now at market rates (19%). USAID now stresses the scope for learning from the experience of private non profit organizations working in housing, and promotes the establishment of voluntary savings plans targeted at housing.

(iv) EPZ housing plans

Three EPZs told us they had plans for housing developments aimed at their workforces: ZIP Continental, ZIP San Miguel, and (possibly) ZIP Búfalo. Roberto Larios of ZIP San Miguel told us that housing is a priority area for action, and he plans to urbanize 30 manzanas adjacent to the park. However, only ZIP Continental has made concrete progress to date on worker housing. It has a 30 manzana/800 lot urbanization carried

²⁸ The figure is calculated as follows: annual capital repayment is $10,000 \div 9 = L.1,111$. The average sum outstanding during the life of the loan is L.5,000, so average annual interest at 16% is $0.16 \times 5,000 = L.800$. That gives an annual total of $L.1,111 + L.800 = L.1,911$, and a monthly total of L.159.

out by La Metropolitana, adjacent to ZIP Continental in La Lima, on land belonging to the Rosenthal family. 400 lots were awaiting only electricity for completion in June 1992.

The development is aimed explicitly at EPZ workers, though it is not closed to other clients. The lots are on sale between L.9,000 for 206 V² and L.17,000 for 309 V², with financing expected to be available over 20 years at 19% interest. La Metropolitana will supply 27% of the L.5.5 mn total required, and was awaiting formal approval for the balance from FOVI. Once construction is included in the package, the cost soars to L.40,500 for a two bedroom house. This can be financed over 20 years with a deposit of L.6,000 and monthly payments of L.600. We estimate that the interest rate implicit in this arrangement is roughly 32% a year. These amounts are outside the reach of households which do not have either professional incomes or multiple worker incomes.

The Continental Group also plans to develop housing on land opposite the park, although it is awaiting clearance from the Honduran Archeological Institute as the site (like much of the Lima area) is rich in Mayan relics. According to the mayor of La Lima, a further urbanization and industrial park project is planned on 64 manzanas belonging to Edwin Rosenthal in Ciudad Planeta. The park would cover 7 manzanas and there would be 780 housing lots.

(v) Housing need in Choloma

The 1988 census shows that Choloma had 7,081 private urban dwellings, with an average occupancy rate of 5.25 persons. The municipality as a whole had 11,756 occupied private dwellings, with an occupancy rate of 5.44. Sixty per cent had electricity, 73% had water and 24% had sewage systems installed. Fifty nine per cent had two rooms or less.

The ICMA study of Choloma published in October 1991 says simply that "the housing deficit is striking and evident." (ICMA, 1991a:17). In 1988 the Dirección General de Urbanismo in Tegucigalpa estimated the deficit in 2,787, projecting it would grow to 6,349 by 1997. However, this is based on forward projection of the global population growth rate of 3.7% for the municipality observed in the intercensal period of 1974-88. Urban population growth is much higher - 10% a year.

ICMA cites a study commissioned by FIDE in 1990 which found a deficit of 3,200 houses and projected that at least 12,000 new houses would be needed to reduce this to zero by 1997. Interviewed during the present study (June 1992), the mayor of Choloma, Gustavo Torres, said the deficit was already 8,000 and would be 12,000 in 1993. He said that EPZ workers were paying up to L.200 a month to rent rooms.

The major problem with tackling this deficit is the very high cost of land in the area, due to the impact of the EPZ development. There is no local authority land available for housing: the "ejidales" have all been privately occupied for many years. We heard figures for unimproved land prices as high as L.25 per V² (quoted by Manuel Trejo of La Metropolitana Saving and Loan Association). Sr. Torres mentioned prices between L.10 and L.30, and said they were up 1000% over the last five years (from a range of L.1.0 - L.3.0).

Sr. Torres said the municipality has approached FOSOFI with a project to urbanize a 107 manzana area belonging to the Instituto Nacional Agrario in La Jutosa, 7 km to the west of the city. The road to La Jutosa is due to be paved in 1993. The area could support 1,500 dwellings. If the title were passed to the municipality or directly to a developer, this could go ahead, he said. There are also 22 manzanas of land owned by the national railway in Trincheras, between Choloma and the López Arellano colony. The National Railway has a draft plan to develop the area which includes 225 housing lots of over 300 V² each.

(vi) Housing need in Villanueva

According to the 1988 census, Villanueva had a total of 7,458 dwellings, of which only 6,175 were occupied. The average occupancy rate was 5.3 persons; 62% had electricity; 79% had water; and 8% had sewage disposal. The urban areas had 2,282 occupied dwellings and 248 (10% of the total) unoccupied. Although ICMA (1991b:23) reported a need for 3,300 additional rooms to tackle existing overcrowding, and registered the demand for rooms to rent from immigrant workers as an element of housing need, it is clear that the zone has a much less marked housing deficit than Choloma.

The municipality is attempting to negotiate with the Compañía Azucarera Hondureña the return of 30 manzanas (of a total of 236 manzanas of ejidal land presently used rent free by the company) for a housing project. The mayor, Guadalupe López, also informed us that Banco Sogerín plans to urbanize 180 lots in the eastern zone of the city, adjacent to ZIP Villanueva.

He said that unimproved land prices are around L.10 per V², but go as high as L.50 opposite the ZIP. He said that the local authority sets a minimum standard of 400 V² per lot, in order to maintain the tradition that each household should be able to plant a few trees. This minimum had been an obstacle for some urban developers considering projects in Villanueva, he said.

(vii) Housing need in La Lima

La Lima has 5,225 urban houses, with an average occupation density of 5.49. Eighty five per cent have water; 76% have sewage disposal; and 72% have public electricity while 17% have private systems. These levels are all well above national averages. The 1988 census estimated a housing deficit of 638, and found only 58 dwellings unfit for human habitation. The local authority estimated a deficit of 700 units in 1991.

The mayor, Edilberto Martínez, said that to date there has not been noticeable migration of workers to La Lima due to the ZIP. However, there is a noticeable room shortage and rents are running at L.100 a month for rooms and L.200 to L.300 for a small house. There is no land available for sale in the urban area, so there is no quoted price. The only development plans at present in hand are the Continental Group projects reported above.

5.3 Education

(i) Illiteracy and overall educational participation

Cortés is well served with educational facilities, relative to the rest of Honduras, and this is reflected in high access levels in the municipalities in the EPZ areas. Only 14% of children in La Lima, 18% in Choloma and 20% in Villanueva do not have access to primary education.²⁹

Data from the 1988 census show that in Choloma, 29% of the population aged ten and over is illiterate - almost exactly the same proportion of the population had had no education of any sort. 44% of the total population between the ages of 5 and 29 inclusive was attending some sort of educational course. In La Lima, illiteracy in over tens was just 14.7%, 15% had had no instruction, and 51% of those aged 5-29 was taking classes. But in Villanueva, the first two indices were much higher, and the third correspondingly lower: 42% were illiterate, and 42% without instruction; only 40% of 5-29s was taking classes.

(ii) Preschool education (age range 4-6)

There is little provision for preschool education. La Lima in 1990 registered 9 centers, with 337 children enrolled; just 34% of children aged 5 and 6 in La Lima were in preschool education; Choloma in 1988 had 11 centers with 344 enrolled. Villanueva had 12 centers with 529 enrolled. We do not have ratios for the others, but would be surprised if either were better than La Lima.

(iii) Primary education (age range 7-12)

The data on primary education services presented in the following tables show that La Lima has a very good situation, with desertion rates of only 2.5%, the highest pass rates and only two percent of teaching posts vacant. The desertion rates are higher in the other two municipalities, at around 5% - though the figure dropped significantly in Villanueva, from 5% to 3.7%, between 1988 and 1991. Choloma has the worst teacher supply problem, with 10% of posts vacant, while 6% are vacant in Villanueva. Data from the same source (not in the tables) show that 84% of La Lima's primary schools have drinking water, and 79% have electricity. The ratios for Choloma are respectively 61% and 57%; for Villanueva, 57% and 55%. The very strong presence of rural schools run by the Tela Railroad Company is the obvious factor explaining the good statistics for La Lima. In Choloma, the municipality had funding from the Fondo Hondureño de Inversión Social (FHIS) for school improvements costing L.52,000 in 1991. The FHIS is also building 8,000 school desks for the Cortés region as a whole.

²⁹ Data from the project SECPLAN/OIT/FNUAP/PNUD - Políticas y programas de población, pobreza y empleo.

TABLE 6.17 PRIMARY SCHOOLS IN VILLANUEVA, CHOLOMA AND LA LIMA

	<u>Urban</u>	<u>Rural</u>	<u>Total</u>
<u>La Lima</u>	<u>12</u>	<u>40</u>	<u>52</u>
Central government	5	13	18
Local government	4	3	7
Private	3	24*	27
			*=Tela RR Co.
<u>Choloma</u>	<u>23</u>	<u>52</u>	<u>75</u>
Central government	15	51	66
Local government	-	-	-
Private	8	1	9
<u>Villanueva</u>	<u>10</u>	<u>34</u>	<u>44</u>
Central government	2	32	34
Local government	6	-	6
Private	2	2	4

Source: MEP San Pedro Sula

TABLE 6.18 TEACHER SHORTAGE IN PRIMARY EDUCATION, 1992

	<u>No. of teachers in post</u>	<u>No. of vacant posts</u>	<u>Percent vacant</u>
La Lima	315	7	2
Choloma	357	38	10
Villanueva	263	18	6

Source: MEP San Pedro Sula

TABLE 6.19 ENROLLMENT, DESERTION AND PASS RATES
PRIMARY EDUCATION, 1988 AND 1991

	<u>Initial enrollment</u>	<u>Desertion rate</u>	<u>Pass rate</u>
<u>La Lima</u>			
1988	11,096	2.3%	84.4%
1991	11,594	2.4%	89.4%
% rise 1988/92	4.4%		
<u>Choloma</u>			
1988	13,240	4.7%	85.8%
1991	14,730	4.4%	87.5%
% rise 1988/92	11.2%		
<u>Villanueva</u>			
1988	9,750	5.0%	85.4%
1991	10,165	3.7%	88.4%
% rise 1988/92	4.2%		

Note: the pass rate is a percentage of the non-deserters

Source: Calculated from data supplied by MEP San Pedro Sula

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(iv) Secondary education (age range 13-18)

Villanueva has two high schools with just over 1,050 students enrolled; Choloma has three, with just over 1,500 enrolled in 1988 (under 24% of the relevant age group); in contrast, La Lima has six, with 3,351 enrolled (60% of the age group) (all data from 1988 census).

(v) EPZs and the demand for education

Primary enrollment in Choloma rose 11.2% in the three year period 1988-91, which is the main period of growth of EPZ employment (see Table 6.19). Enrollment rose less in La Lima (4.4%) and Villanueva (4.2%), where EPZ jobs grew much less in this period. This suggests that the offer of work in the EPZs might have increased the matriculation rate in Choloma, as women need to free themselves of childcare responsibilities to be able to work.

However, higher matriculation rates may also be related to the offer of government bonds for children of female heads of families who are in primary education (see section v below). And there has been very marked growth in enrollment over the period 1986-92 in both Villanueva (up 22%) and Choloma (up 30%), suggesting that longer term trends may be at work.³⁰

In February 1992, the director of primary education for the Cortés region, Sr. Julio César Madrid, reported that the primary enrollment in the department had risen 10,000 - seven per cent - in a year, confirming that demand for primary education in the area is growing very rapidly. He attributed this to migration linked to the EPZs (El Tiempo, 20-2-92). Although we think increased enrollment rates (caused by the factors mentioned above), rather than immigration to the Department, are likely to explain most of the rise to date, the basic point that EPZ development is likely to add to education demand in the region is surely right.

5.4 Health

(i) Health problems in the area

The health problems reported most frequently in La Lima are respiratory diseases, stomach infections and malaria. In Choloma, malnutrition, respiratory disease and stomach infection are the main problems. The respiratory disease is thought to be linked to atmospheric pollution from the cement factory at Bijao and the Brooms and Mops factory to the south of the city. Choloma also has an outbreak of neonatal tetanus: 14 of 20 cases nationwide in 1992 were in Choloma. In Villanueva, the municipality has participated in an intensive anti cholera education campaign (ICMA 1991a, 1991b and 1991c).

³⁰ 1986-92 data from the Ministry of Education, Tegucigalpa.

(ii) Health ministry facilities

Hondurans without IHSS medical cover attend either health ministry clinics or private doctors. All three cities are in Region 3 of the Public Health Ministry (MSP). None of the three cities has a MSP hospital; they are covered for hospital services by the new L.60 mn Mario Catarina Rivas hospital in San Pedro Sula, which has 700 beds, and was funded by the IADB and by the Government of France.

Choloma has four MSP rural health centers (CESARES) and two health centers with doctors (CESAMOS). They are reported to be very stretched by the present level of demand (ICMA 1991a: 19). The Catholic Church has a small clinic which attends around 100 people a week. Villanueva has one CESAMO and 4 private clinics, plus 5 CESARES. La Lima has only one CESAMO. However, the Tela Railroad Company has a private hospital in the town for its workforce, with 300 beds.

TABLE 6.20 MINISTRY OF HEALTH FACILITIES IN
CHOLOMA, LA LIMA AND VILLANUEVA

	<u>CESAMO</u>	<u>CESAR</u>
Choloma	2	4
Villanueva	1	5
La Lima	1	0

Source: Ministerio de Salud Pública, Health Census 1991

iii) Health Ministry - IHSS cooperation in Villanueva

In Villanueva, the services of the MSP and the IHSS have been unified into an articulated system which aims to avoid duplication of services and to economize effectively on resources. The clinics of the MSP and IHSS each accept patients who would previously have had to go to the other, referring them on only in cases where they are unable to provide the necessary service. This arrangement is a pilot for a national reform of health services which will aim to rationalize the two systems.

5.5 Social compensation programs and the EPZ areas

In the last two and a half years, the Callejas administration has launched an ambitious social compensation program with the support of the World Bank, IADB, United Nations and other international donors. One part of this program is the Fondo Hondureño de Inversión Social (FHIS), which directs resources into local authority and other projects which meet standard criteria including job creation and local infrastructure improvements.

We have touched on the FHIS in different sections of the present report, where the fund's programs have had a bearing (for instance, water and education services, above). In addition to those already mentioned, in Choloma there is a FHIS project to improve streets through the construction of proper rainwater run offs. In the section on worker

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transport, we floated the idea that the FHIS might be a participant in funding for the revamping of the railway system as a metro.

The other main element of the social compensation programs is the Programa de Asignaciones Familiares, PRAF. The main part of PRAF are bond programs. The bonds, which can be exchanged for food, medicine and clothing, are given to women and children in the poorest sections of the population. They are worth L.20 per month per child.

There are two bond programs: the mother and infant bond, and the bond for women family heads with children in primary education. In the first case, the child must attend a health center for the mother to get the bond; in the second, the child must attend primary school. In this way, the bonds aim to have a long run positive impact on human capital formation through improved primary health and education, as well as a direct impact on nutrition. In June 1992, there were 125,000 beneficiaries of the family heads program and 56,000 of the mother and infant program in the country as a whole.³¹

The PRAF programs are carefully targeted towards the neediest sections of the community, using social needs indicators taken from various population surveys, principally the 1988 census. According to the index of relative poverty used to this end, Cortés is the most prosperous department of the country, and the three municipalities where the EPZs are located are among the top 20 in the country (La Lima is first, Choloma 12th and Villanueva 19th).³² For this reason, Cortés is not among the 7 departments where the mother and infant bond program operates.

The Mother Head of Family is active in Cortés, benefitting 8,861 mothers of 12,352 children in the first quarter of 1992. This figure is expected to rise in the second quarter, due to late enrollments. In 1991, there were 10,693 mothers and 15,382 children receiving bonds under the program. The number of children benefitting in Choloma was 2,602, in Villanueva 723 and in La Lima, 719. In 1991, the program covered 10.33% of the school population in Cortés (table 3.19 below).

However, the program has an eligibility test of L.300 maximum income, which would automatically exclude any woman working in the EPZs. This is not an ideal system, as it will tend to reduce labor supply, both to the EPZs and to other jobs of all types paying L.300 or more. This problem should disappear in future because the program is moving towards the use of age/size measures in children as the single eligibility test.

However, data from an age/size census carried out by the World Health Organization and the MEP show that the EPZ areas are all in the top third of the country, so they can not expect to benefit much from the growing pool of resources devoted to this program.

³¹ PRAF also has an occupational training program for women which we discussed above in the section on training.

³² The factors which are used to construct the index are housing conditions (type of construction material and overcrowding), access to water, sewage, and education services, and income in relation to a subsistence norm

For the same reason, it is not likely that the mother and infant program will be expanded into these areas.

There is a-priori evidence that the Mother Head of Family program has had a positive impact on primary school enrollment rates in the Department: enrollment, which grew only 1.34% in the year 1989/90 before the program started to operate, grew at 4% in 1990/91 when the program was in place. This is a less strong impact than the national increase from 1.7% to 11.6% - probably because the initial enrollment rate in Cortés was much above the average so there was less scope for improvement.

TABLE 6.21 BENEFICIARIES OF MOTHER HEAD OF FAMILY PROGRAM CORTES

	1991		1992 1st quarter	
	<u>Mothers</u>	<u>Children</u>	<u>Mothers</u>	<u>Children</u>
San Pedro Sula	4,663	6,330	3,611	4,706
Choloma	1,711	2,602	1,451	2,116
Villanueva	499	723	416	576
La Lima	561	719	486	615
Total Cortés/1	10,693	15,382	8,861	12,352

/1 Total includes 8 municipalities not shown in the breakdown.

Source: PRAF

In 1992, PRAF had a global budget for the bond program of L.38 mn, covering 181,000 children. In mid June 1992, PRAF was negotiating funding for the three year period through 1995 with the World Bank (\$4.5 mn) and World Food Program (United Nations/FAO) (\$10.8 mn). If these funds are secured, the programs will expand as shown in the above table. As can be seen, the Mother Head of Family program will disappear in 1994, and thereafter all resources will be concentrated in the Mother and Infant program.

TABLE 6.22 PROJECTED EXPANSION OF PRAF BOND PROGRAM, 1992-1995

<u>No. of children covered</u>	Mid 1992	Sept 1992 /1993	Sept 1993 /1994	Sept 1994 /1995
Mother head of family	125,000	195,400	265,000	program ends
Mother and infant	<u>56,000</u>	<u>107,200</u>	<u>130,700</u>	<u>133,000</u>
Total	181,000	302,600	395,700	133,000

Source: PRAF, Tegucigalpa

5.6 EPZs and the local authorities

It is clear from the evidence presented in the foregoing sections that the development of the EPZs has had multiple consequences for the communities where they are sited. First among these is a new affluence of work and a significant increase in household incomes. However, the EPZs have also begun to generate population shifts which can be expected to accelerate over time, they have radically altered land use patterns and land values, and they have placed new demands on many public services, either directly or indirectly.

In this section, we overview the relationship between the EPZs and the local authorities which are responsible for regulating community development and for providing directly many of the basic services needed by both industry and the population. We conclude that the EPZ development brings increased responsibilities for the municipalities, which are probably disproportionate to the new revenue received from the sector. This is due in part to tax exemptions offered to the EPZs. The local authorities are generally accepted to be overstretched. The ICMA study of Choloma puts the point succinctly: "In its present technical and financial state, the Municipality of Choloma is not capable of offering the services needed by the industrial zone" (ICMA,1991a:38).

(i) The statutory framework: the new local authority legislation

Honduran local government was widely reformed in two recent laws: decrees 134-90 and 48-91. These established the principle of municipal autonomy (Article 12) and widened the powers and responsibilities of local government, raising it above a number of national parastatal authorities to which it has traditionally been subject, such as SAANA, the forestry development corporation (COHDEFOR), and the National Agrarian Institute (INA). Among the powers and responsibilities³³ of local authorities are the following (Article 13, as reformed):

- to establish and enforce a plan for municipal development, including the zoning of land use in the municipal area for housing, commerce, industry, civic use, and recreation
- to construct and administer water and sewage and electricity systems either directly or through specialized entities
- to protect the local environment, and promote reforestation (Secretaria de Gobernación y Justicia,1991:7,12).³⁴

The law also provides for the modernization of municipal administration, and USAID has a \$10 mn program of support to this process involving the International City Management Association (ICMA), which is giving intensive support 14 municipalities in

³³ The following list is not comprehensive - we mention only points of relevance to our study.

³⁴ Local authorities' powers and responsibilities in relation to environmental protection will be extended by the proposed General Law of the Environment, in draft form at October 1992.

the Sula Valley and Olancho over a seven year period, including all the municipalities in the area of our study.³⁵

On local authority finance, the law specifies a non-deficit budget, which must be submitted to Tegucigalpa for approval, and in which the cost of administration must be under 50% of total revenue spending. Local authorities are allowed to set the fees for their services in the "Plan de Arbitrios", and also derive income from a local income tax from individuals and companies at low fixed rates set in the legislation. However, non traditional exporters - which includes the EPZs - are exempt from the latter (Article 78, as reformed).

(ii) Issues in planning control and environmental protection

We identified two major issues in relation to planning control and environmental protection in the course of our study. First, there remains a major gap between the letter of the law and the practice on the ground in relation to land use planning and environmental norms. Second, the new proposal for a Sula Valley Authority has once more clouded the scope of municipal authority.

Land use and construction permits

The local authority's power to regulate development rests basically on the requirement to secure a construction permit for any development works. The authority has the power to fine, or demolish the constructions of, people or companies who proceed without a permit. Apart from land use planning, the local authorities also have a general responsibility for planning the development of their communities, which supposes some notion of appropriate rates of change, since new industrial jobs bring with them both industrial demands on local services like sewage, and population changes which have major implications for the development of the area as a whole (water, sewage, health, education, housing).

Ideally, job creation should be related to local unemployment in order to minimize the population shifts which are the most problematic aspect of development planning. As we saw in Part 2 of the present study, the existing un- and under-employment in the Sula Valley area is relatively small compared with projected job creation, suggesting that migration and the associated problems will become a serious issue for development planners in the local authorities. The mayor of Villanueva, Guadalupe López, told us that he feels three EPZs (Villanueva, Búfalo and Buenavista) was enough at present for the municipality, and he intended to resist plans by the Diek family to establish a fourth EPZ in the area.

In practice, however, planning control is very weak: by the time people come to ask for a construction permit, they have already begun their construction. Gustavo Torres, mayor of Choloma, summed up the real situation as follows: "The supposed municipal authority

³⁵ The diagnoses prepared in 1991 by ICMA teams working on the municipalities of Choloma, Villanueva and La Lima have been an important general source of information for the present study.

is really very relative. Though the law allows us to take a series of actions, in practice it's not so." The main immediate issue for the local authorities seems to be the income from issuing permits, rather than the regulation of land use (see below).

Part of the problem is that the development plans themselves are outdated. Choloma's development plan dates from 1988 - i.e. before the EPZs began to be developed - and was only adopted legally in 1991 by the municipality. In the meantime, Choloma city's area of industrial development had boomed from 1.7 ha to 26.5 ha (ICMA 1991a: 16). In fact, the Choloma EPZs are located in areas zoned for industry - though the mayor thinks this is a "pure accident". In contrast, ZIP Villanueva is located in an area which was zoned for housing.

Environmental control

We found a general consensus among people we interviewed that there is now a serious problem of pollution in the water courses of the Sula Valley - especially in the River Chamelecón and the Laguna de Alvarado, into which it runs. This is not particularly the result of EPZ development - rather, it is the result of economic development and population growth in the region in general. However, it poses the need for much stricter regulatory norms on new industrial developments of all sorts.

In fact, the apparel manufacturers who dominate the EPZs are not by their nature industrial polluters. Other industries in the area, such as Cementos Bijao, Brooms and Mops (both in Choloma) and TEXHONSA (Búfalo) are much worse offenders in terms of the impact of their industrial processes on the surrounding atmosphere and water courses. To date, in the case of the EPZs, the issue of pollution relates rather to the impact of large human concentrations: i.e. to sewage and solid waste disposal.

However, this could change in the future, as the industrial composition of EPZ activity develops towards other types of activity, including chemicals and textile manufacture. The Mexican frontier zone of the Rio Grande is an example of the type of problems which could arise if an adequate regulatory framework is not established beforehand. A proposed new General Environmental Law (in Congress at October 1992) includes a general requirement for environmental impact assessments for polluting industries, which should help in this direction.

The problem is not simply one of formal powers, but also one of effective implementation. Local authorities already have some formal powers to regulate industrial development, but they are not very effective in practice. The issue of sewage treatment provides a barometer of the balance of power between EPZ industries and regulators. The local authorities have the legal power to decide whether a new development needs an oxidization system, or can dispose of raw sewage into the surrounding surface water systems. However, as we saw in section 3.3 above, the only EPZs with their own oxidization systems are those which have been obliged by funding sources to install them.

In La Lima, the mayor told us that ZIP Continental's plans included an oxidization system, but it has not been constructed. The Municipal Corporation passed a resolution

in April 1992 mandating its construction. He also said that the park burns part of its own waste on site, due to customs regulations preventing the removal of cloth residues, causing a smoke pollution problem.

In Choloma, the local authority has not tried to push the EPZs to install oxidisation tanks. The EPZs dump their own solid waste on the corporation's tip, but do not pay. In Villanueva, the unauthorized connection of ZIP Villanueva to the municipal system means that all sewage from the EPZs will be treated (the other EPZs will have their own plants)- but at the cost of the capacity of the system to deal with future household demand. The municipality has tried to persuade the EPZs to participate in its landfill for solid waste, but they have refused to pay, and according to the mayor, they are dumping their waste in inappropriate sites.

The Sula Valley authority and local authority powers

The IADB is planning a major drainage and flood control program for the Sula Valley as a whole, which will begin in 1994, and whose eventual aim is to recover between 50,000 and 70,000 ha for agricultural use. In the first instance, five local programs for areas of around 5,000 to 7,000 will be initiated. The legal framework for this will be created by the formation of a Sula Valley Authority, which would control 23% of the national territory, including the vital resources of the El Cajón electricity system.

However, this proposal has led to tensions with municipalities who feel their newly established mandate is to be over-ruled by a non elective body. According to draft legislation circulating in June 1992, the 15 member Authority would have a stronger representation from the Cámaras de Comercio e Industrias of the region (6 members) than from the elected local authorities (4 members). There would also be 2 central government representatives, and representatives of worker, peasant and rancher organizations in the area. The Authority would be given control over all rural national property, all water resources in river basins and aquifers, mineral resources, and flora and fauna.

The Authority would have a very wide ranging mandate, part of which overlaps the mandate of local authorities in the 1990/1991 legislation. In particular, it covers land use zoning (Comisión Ejecutiva para el Desarrollo Integral del Valle de Sula, 1992:5,9-10). There is apparently a need for the respective powers and responsibilities of the local authorities and the proposed Valley Authority to be clarified before any legislation is finalized.

The mayor of Villanueva told us that the local authorities of the Sula Valley area propose to establish a regional municipal authority through the delegation of powers, which would act as a counterweight to the Sula Valley authority, and would also be able to standardize norms on environmental regulation so that, for example, firms will not be able to avoid requirements to treat effluent by crossing municipal borders.

(iii) Local authority finance and the EPZs

There are three ways in which the EPZs contribute to local authority incomes: local personal income taxes, payment for services, and construction permits. As mentioned above, they are exempt from corporate local authority income and property taxes.

Construction permits

The rates for permits are set in the Plan de Arbitrios. In Choloma, permits are charged at 1% of the value of the construction. At June 1992, the municipality had received L.100,000 from EPZ construction permits, and expected to receive the same amount again from future planned expansions.

The mayor of La Lima, Edilberto Martínez, told us (June 1992) that the municipality was still owed L.67,000 by ZIP Continental for construction permits, and we understood that the municipality of Villanueva had not been paid for construction permits by ZIP Villanueva.

Personal income taxes

The personal local income tax (Impuesto personal único - Ley de Municipalidades, Artículo 77) is collected by employers sited in the authority's bounds. Although the tax rate is rather low, the tax can represent a significant proportion of local authority income where employment concentrations are large. On incomes up to L.5,000 per year the rate per L.1,000 is just L.1.50; for incomes of L.5,001 to 10,000 it rises to L.2.0. According our survey data, average annual earnings of EPZ production line workers in February 1992 were L.8,710. An average worker would therefore pay L.15 lempiras.

This implies a total income tax from the (approximately) 17,500 EPZ workers at June 1992 of roughly L.260,000 a year, divided between the municipalities (according to the number of jobs in each) roughly in the proportions: Choloma 85% (L.223,000), Villanueva 6% (L.15,500) and La Lima 9% (L.23,400). For Choloma, this sum represents over 10% of total municipal income.³⁶

Service charges

In Choloma, the only service for which the EPZs were actually paying in June 1992 was the fire brigade, at the rate of L.100 per factory unit. They all used the municipal tip, and INHDELVA and CHIP used the sewage system, but none made any payment as yet for any of these services; however, the mayor expected to negotiate charges with them. In La Lima, ZIP Continental pays for the fire brigade and the waste disposal service.

³⁶ Choloma's total income in 1990 was L.1.45 mn and in 1991 this was projected to rise some 60% (ICMA, 1991a: Annex 13).

The cost of the corporate turnover and property tax exemptions

The theory of tax exemption for export promotion is based on the idea that you should not scare away investors by loading them with taxes to rake off their surpluses, which are not levied by competing locations, and which have nothing to do with social opportunity costs related to their activity. However, where taxes are a form of collecting a contribution to cover social costs directly related to some activity, they are charges rather than redistributive devices, and it is clearly economically inefficient permanently to subsidize the producers by not levying them. There is therefore an a-priori question about the appropriateness of the local authority tax exemption for EPZ companies.

We estimate the value of local property tax exemptions for the EPZs at approximately L.430,000, and the value of corporate local turnover tax exemption at roughly L.85,000, making a total of over half a million lempiras for the three municipalities of Choloma, Villanueva and La Lima. This is a very considerable sum compared with their present budgets. The estimates are explained in the following paragraphs.

The cost of corporate turnover tax exemption

Local authorities levy a turnover tax on business ("Impuesto sobre industrias, comercio y servicios", Ley de Municipalidades, Artículo 78). To make an exact estimate of the cost of EPZ firms' exemption would require detailed data on the gross value of production, which is the basis of the tax. However, a rough estimate can be made supposing that labor cost is about 67% of turnover³⁷. With average total labor cost including employers' social security contributions running at L.10,500 (FIDE, 1992), this would suggest a taxable income of L.283 mn per year.

Assuming an average local tax rate of L.0.30 per L.1,000³⁸, this would generate L.85,000 per year in local authority taxes, divided between the authorities in the same proportions as the personal income tax. This does not include the export producers outside the EPZs. The figure does not seem large either in relation to the personal local income taxes nor in relation to the municipalities' budgets.

Corporate real estate tax exemption

Local authorities can levy real estate taxes ("Impuesto sobre bienes inmuebles", Ley de Municipalidades, Artículo 76) at between L.1.50 and L.5 per L.1,000 of cadastral value (Ley de Municipalidades, Article 76). A reasonable cadastral value for developed EPZ space might be L.20 per V². Total EPZ area is 616 manzanas, giving an estimated cadastral value of some L.123 mn. If the municipalities set the tax rate at L.3.50 per

³⁷ This relationship is calculated from Central Bank national accounts data for the maquila sector dated 18th September 1991.

³⁸ The tax structure is partially regressive, with rates of L.0.30 per L.1,000 for the first L.½ mn of turnover, L.0.40 between L.½ mn and L.10 mn; L.0.30 up to L.20 mn; L.0.20 up to L.30 mn and L.0.1 thereafter.

L.1,000, this would eventually generate L.430,000 , divided between Choloma (L.176,000), Villanueva (L.185,000) and La Lima (L.75,000).

Given the stresses placed on the local authorities' services by the EPZs' development, it is questionable in principle whether the authorities should be asked to absorb the cost of this subsidy. It should be registered as a central government fiscal expense, with the funds transferred to the local authority concerned. Otherwise, the inevitable result will be that the supposedly subsidized services tend to deteriorate or disappear, as the municipalities will not have sufficient income to fund them.

BIBLIOGRAPHY

- Angeles Villareal, M 1991 - Mexico's maquiladora industry, CRS report for Congress, Library of Congress 91-706 E (September)
- CADERH
Del Cid, R. 1992 - Respuesta, No. 1, Tegucigalpa
1991 - Capacidad de movilización de ahorros en el sector informal, USAID Honduras: 522-0324-0-00-1273-00 (November)
- EFHS 1992 - Results of the National Epidemiology and Family Health Survey, 1991, Ministry of Public Health, Tegucigalpa
- EIU 1992 - Country Report - Guatemala, El Salvador and Honduras, Second Quarter, Economist Intelligence Unit, London (April)
- Fernández Kelly, M.P. 1978 - Mexican Border Industrialization, female labor force participation and migration - Paper presented at the annual meeting of the American Sociological Association (September)
- FIDE
Gheriani, E 1992 - Databank 1992
1992 - Estudio sobre comercialización y ventas en el Ferrocarril Nacional de Honduras (Mimeo, January)
- HONDURAS
- Comisión Ejecutiva para el Desarrollo Integral del Valle de Sula
1992 - Proyecto de Ley de la Autoridad para el Desarrollo Integral del Valle de Desarrollo Integral del Valle de Sula (mimeo, May)
- Decreto 167-91 1991 - Ley del Fondo Social de la Vivienda, La Gaceta, No.26,619 (December) Decreto 10-72
1972 - Ley del Instituto Nacional de Formación Profesional, La Gaceta Formación Profesional, La Gaceta No.22,906 (December)
- Ministerio de Comunicaciones Obras Publicas y Transporte,
Dirección General de Transporte Nor-Occidental
1991 - Diagnostico del transporte urbano de San Pedro Sula (mimeo)
- Presidency of the Republic 1992 (a) - Mother Head of Family Project - Impact on elementary school enrollment (mimeo, March)

- Presidency of the Republic 1992 (b) - Comisión Nacional del Ambiente (CONAMA), Ley General del Ambiente (draft) (mimeo, August)
- Secretaria de Gobernación y Justicia 1991 - Manual sobre la nueva ley de municipalidades, sus enmiendas, comentarios y aplicación
- Secretaria de Estado de los Despachos de Trabajo y Previsión Social 1992 - La industria de la maquila en Honduras (Mimeo, April)
- SECPLAN 1992 - Conocer, para actuar: perfil municipal de Honduras
- IADB 1991a - Honduras, Programa de rehabilitación ampliación mejoramiento y conservación de la red vial (HO-0040)
1991b - Honduras, Proyecto de saneamiento y vías urbanas de San Pedro Sula (HO-0039)
- ICMA 1991a - Diagnóstico Municipio Choloma
1991b - Diagnóstico Municipio Villanueva
1991c - Diagnóstico Municipio La Lima
(all three reports coded AID/RHUDO/CA 522-0340)
- Safa, H.I 1990 - Women and Industrialization in the Caribbean, in Sticher S, Parpart J.L. (eds) Women, employment and family in the international division of labor, Macmillan, London
- USAID 1984 - Evaluación administrativa y operacional del Instituto Nacional de Formación Profesional (Jan.)
- Walker, I 1991 - El ajuste estructural y el futuro desarrollo de la región centroamericana, Postgrado Centroamericano en Economía, Documento de Trabajo No. 2 (March)

PRICE WATERHOUSE
 ESTUDIO DE BASE DEL IMPACTO DE LAS ZONAS INDUSTRIALES
 DE PROCESAMIENTO EN EL VALLE DE SULA.

ENCUESTA I

PARA TRABAJADORES DE LOS ZIP

A SER PRACTICADO EN EL LUGAR DE TRABAJO
 TIEMPO ESTIMADO POR ENTREVISTA: 20 MINUTOS

NUMERO SERIE: _____

PARQUE INDUSTRIAL: _____

DIRECCION DEL ENTREVISTADO:

Calle _____
 Barrio o colonia _____
 Municipio _____

NOMBRE DEL ENTREVISTADOR: _____

RESULTADOS				
NO.DE VISITA	1	2	3	4

FECHA _____
 HORA INICIO _____
 HORA FINALIZN _____
 *RESULTADO _____

*CODIGOS:

1. Entrevista completa
2. Incompleta-cita de continuación:
 fecha: hora: _____
3. Se rehusa
4. Otro (especifique) _____

SUPERVISOR DE CAMPO _____

EDITOR	FECHA:
CODIFICADOR	FECHA:
PROGRAMADOR	FECHA:

1. DATOS BASICOS

1.1 Sexo: M F 1.2 Edad: (Años completos) _____

1.3 Nacionalidad: _____

1.4 Estado civil:

- | | | |
|----------------|-----------------|------------|
| i Soltero/a | ii Divorciado/a | (IR A 1.6) |
| iii Separado/a | iv Viudo/a | (IR A 1.6) |
| v Casado/a | vi Unión libre | (IR A 1.5) |

1.5 ¿En este momento, su compañero vive en la misma casa con Ud.? SI NO

1.6 Número (vivos) de: hijos _____ hijas _____

1.7 Número de sus propios hijos que actualmente viven en la misma casa con Usted: _____

1.8 Incluyendo sus hijos, ¿cuántas personas en total que viven en la misma casa con Usted son económicamente dependientes de Usted?

1. Menores de edad _____ 2. Adultos _____

1.9 ¿Son todos sus hijos del mismo padre /madre?

SI [IR A 1.11] NO [IR A 1.10]

1.10 ¿Cuántos diferentes padres/madres hay? _____

1.11 ¿Quién es jefe de su familia?

- | | |
|-----------------------|-----------------|
| 1. El entrevistado | 2. Su compañero |
| 3. Su padre | 4. Su madre |
| 5. Un hermano | 6. Una hermana |
| 7. Otra persona _____ | |

1.12 En total, ¿cuántas personas viven en su hogar? Adultos _____ Menores _____

2. EDUCACION DEL ENTREVISTADO

2.1 ¿Usted sabe leer y escribir? SI NO

2.2 ¿Asiste actualmente a un establecimiento de enseñanza? SI NO

2.3 ¿Cuál es el nivel más alto de estudio que cursa o cursó?; y ¿Cuál es el último año aprobado en ese nivel?

- | | | |
|------------------------------|---------------------------|-------------------|
| 1. Ninguno | 2. Pre-primaria | 3. Primaria |
| 4. Cent.alfabetn. | 5. Secundaria | 6. Técnico formal |
| 7. Superior no universitaria | 8. Superior universitaria | |

PARA 4-8: ¿Ultimo año aprobado? _____

2.4 ¿Qué educación técnica tiene Usted?

- | | | |
|-----------------|----------------|---------------|
| 1. mecánica | 2. electrónica | 3. soldadura |
| 4. modista | 5. belleza | 6. fontañería |
| 7. electricidad | 8. cocinera | 9. ninguno |
| 10. Otro: _____ | | |

3. MERCADO DE TRABAJO

3.1 ¿Cuál es su trabajo actual?

- | | | |
|---------------|---------------|---------------|
| 1. Operario | 2. Técnico | 3. Secretaria |
| 4. Supervisor | 5. Contador | 6. Motorista |
| 7. Gerente | 8. Otro _____ | |

3.2 ¿Tiempo en éste trabajo? _____ meses/años

3.3 ¿Tiempo en ésta empresa? _____ meses/años

3.4 ¿Tiempo en éste Parque? _____ meses/años

3.5 Antes de venir al ZIP, ¿qué hacía?

Trabajó:

- | | | |
|--------------------------|---------------|-------------|
| 1. Trabajadora doméstica | | |
| 2. Obrero/a: | a) industrial | b) agrícola |
| 3. Ventas: | a) en tienda | b) informal |
| 4. Otro trabajo _____ | | |

[IR A 3.7]

No trabajaba:

- | | | |
|---------------------|---------------|------------------|
| 5. Ama de casa | 6. Estudiante | 7. Desempleado/a |
| 8. Otra razón _____ | | |

[IR A 3.6]

3.6 ¿Porque decidió empezar a trabajar?

- | | |
|---------------------|---------------------------|
| 1. Por el dinero | 2. Antes no hubo trabajos |
| 3. Otra razón _____ | |

[IR A 3.9]

3.7 ¿Cuánto ganaba en su último trabajo antes de trabajar en el ZIP? L. _____ por _____

3.8 ¿Cuáles de los siguientes estuvieron entre sus motivos por trasladarse al ZIP?

- | | |
|------------------------------|------------------------|
| 1. Mejor salario | 2. Mejores condiciones |
| 3. Más cerca de casa | 4. Estar con amigas/os |
| 5. Mayor seguridad de empleo | |
| 6. Otros _____ | |

3.9 ¿Cómo supo del trabajo en el ZIP?

- | |
|--|
| 1. De los periodicos, radio o televisión |
| 2. De un amigo/a |
| 3. De una hoja publicitaria del ZIP |
| 4. Otro _____ |

3.10 ¿Usted se trasladó para vivir en ésta zona especialmente para trabajar en el ZIP?

SI NO

¿Dónde vivía antes? _____ Pueblo, Depto
¿Cuándo se trasladó? _____

3.11 ¿Cuánto tiempo le toma cada día para llegar a su centro de trabajo?

_____ (Horas, minutos)

3.12 ¿Qué medio de transporte usa para llegar a trabajar?

- | | | |
|---------------|----------------|---------|
| 1. Bus | 2. Carro priv. | 3. Taxi |
| 4. Bicicleta | 5. A pie | 6. Tren |
| 7. Otro _____ | | |

3.13 ¿Cuánto le cuesta diariamente, ida y vuelta? L. _____

3.14 ¿Cuál es su jornada de trabajo?
No. de horas _____

Turno: 1. Dia 2. Mixto 3. Noche

3.15 Dentro de su jornada de trabajo, ¿cuánto tiempo se le permite para:

- | | |
|----------------|--------------------------|
| 1. Comer _____ | 2. Otros descansos _____ |
|----------------|--------------------------|

3.16 ¿Tiene hijos menores de 13 años?

SI NO
[IR A 3.17] [IR A 4.1]

3.17 ¿Quién cuida sus hijos menores de 13 años cuando está trabajando?

- | | |
|----------------------------|----------------------|
| 1. Compañero/a | 2. Otro pariente |
| 3. Se paga una niñera | 4. Guardería privada |
| 5. Guardería de la empresa | |
| 6. Otro arreglo _____ | |

7. No es necesario cuidarles, porque:
(señalar no. de niños en cada categoría)

- | | |
|-------------------------------|-------|
| 1. Están en escuela o colegio | _____ |
| 2. Están trabajando | _____ |
| 3. Se saben cuidar | _____ |
| 4. Otro razón _____ | _____ |

4. INGRESOS Y GASTOS

4.1 ¿En qué base se le paga?

- | | |
|---------------|-------------------------|
| 1. por hora | 2. por pieza/al destajo |
| 3. Otro _____ | |

4.2 ¿Cuánto ganó semana/mes pasado? L. _____

4.3 ¿Usted personalmente tiene otras fuentes de ingreso aparte de su salario aquí?

SI NO ---[IR A 4.4]

¿Cuáles son? (dar monto/mes):

- | | |
|-----------------------------------|-------|
| 1. Contribución de padre de hijos | _____ |
| 2. Bonos del gobierno | _____ |
| 3. Trabajo de hijos | _____ |
| 4. Otros trabajos propios | _____ |
| 5. Otros _____ | _____ |

4.4 Aparte de Usted, ¿cuántas otras personas que viven en su hogar trabajan para ganar un ingreso? _____

4.5 ¿Es Usted él que más contribuye a los gastos del hogar?

SI NO

4.6 En una semana típica, ¿cómo gasta sus ingresos?
(indicar monto aproximado en los siguientes rubros)

- | | | | |
|---------------|-------|-------------------|-------|
| 1. Comida | _____ | 2. Vivienda | _____ |
| 3. Transporte | _____ | 3. Educación | _____ |
| 5. Diversión | _____ | 6. Pagando deudas | _____ |
| 7. Ahorros | _____ | | |

4.7 ¿Cuántos ahorros tiene actualmente? L. _____

4.8 ¿En qué forma tiene sus ahorros? (Indicar montos de cada tipo):

- | | |
|-----------------------------------|-------|
| 1. Billetes en efectivo | _____ |
| 2. Cuenta bancaria | _____ |
| 3. Ahorro y préstamos/cooperativa | _____ |
| 4. Prestado a un amigo/familiar | _____ |
| 5. Otro _____ | _____ |

5. SALUD, SERVICIOS MEDICOS, PLANIFICACION FAMILIAR Y Y RELACIONES COMUNITARIAS

5.1 ¿Está Usted inscrito en el IHSS?

SI NO NO SABE

5.2 ¿Hay servicio médico del IHSS en su lugar de trabajo?

SI NO NO SABE

IR A 5.3

1. ¿Quién puede utilizar este servicio?

1. Usted 2. Sus hijos 3. Su compañero

2. En los últimos 6 meses, ¿cuántas veces han utilizado el servicio médico:

1. Usted 2. Su compañero/a 3. Sus hijos

3. ¿Qué opinión le merece el servicio?

MB B R M MM

Dar razones por su respuesta:

4. Usted considera que el servicio médico en su lugar de trabajo vale la pena considerando el costo de sus contribuciones al IHSS?

SI NO NO SABE

5.3 Cuando su familia necesita ayuda médica, ¿para dónde van, y cuanto tiempo necesitan para llegar desde su casa?

Tiempo para llegar.

1. Clínica/hospital/ doctor privado
2. Centro de Salud
3. Hospital - IHSS
4. Hospital - MSP
5. Farmacia
6. Otro _____

5.4 En los últimos 6 meses, ¿cuántos días ha perdido de trabajo por enfermedad (especificar cada enfermedad):

a) Enfermedades del entrevistado:

_____ Días _____
_____ Días _____

b) Enfermedades de sus hijos:

_____ Días _____

5.5 ¿Qué tipo de participación tiene Usted en las siguientes actividades en su comunidad? (para cada caso, señale A, M o N):

1. Deportes
2. Partidos políticos
3. Clubes sociales
4. Patronato
5. Iglesia/religión
6. Sindicatos
7. Grupos de mujeres

5.6 ¿Utiliza Usted cualquier método de planificación familiar?

SI [IR A 5.7] NO [IR A 5.8]

5.7 SI PLANIFICA:

1. ¿Por qué razones planifica?

1. Económicas
2. De salud
3. Religión/moral
4. Otras razones _____

2. ¿Quién decide planificar?

1. Usted 2. Su compañero 3. Ambos [IR A 5.9]

5.8 SI NO PLANIFICA: ¿Por qué razones no planifica?

1. Económicas
2. De salud
3. Religión/moral
4. No tiene relaciones sexuales
5. No conoce ningún método
6. No puede conseguir métodos
7. Está embarazada
8. Temor
9. Su pareja no lo permita
10. No hace falta si uno es cuidadosa
11. Otras razones _____

5.9 Señale cuales de los siguientes métodos de planificación familiar Usted

(a) conoce (b) ha utilizado (c) está utilizando:

1. Piladora/pastilla
2. Condones/preservativos
3. DIU (anillo, diapositivo)
4. Esterilización: 1)feminina
2)masculina (Vasectomía)
5. Inyección
6. Espuma/crema/jalea/ovulos
7. Ritmo (donde no se mantienen relaciones durante el período fértil de la mujer)
8. Retiro (donde el hombre toma mucho cuidado y se retira antes de eyacular)
9. Otros : _____

5.10 ¿Donde consigue Usted su método de planificación familiar?

1. Hospital/Clinica/Medico privado
2. Centro de Salud
3. Hospital del IHSS
4. Hospital Ministerio de Salud
5. Puesto planificación familiar ASHONPLAFA
6. Clinica ASHONPLAFA
7. Partera
8. Farmacia
9. Pulperia
10. Clinica en su lugar de trabajo
11. Otro: _____
12. No sabe/ no recuerda

5.11 ¿Qué edad es la que Usted considera ideal para empezar a tener hijos? ____ años

5.12 ¿Cuál es, para Usted, el número ideal de hijos? ____

5.13 ¿Ha recibido pláticas de planificación familiar?

SI NO

5.14 ¿Ha oido hablar de enfermedades de transmisión sexual?

SI NO

5.15 ¿HAY ALGO QUE USTED QUIERE AGREGAR SOBRE SU EXPERIENCIA DE TRABAJO EN EL ZIP?

SAMPLE FOR WORKPLACE SURVEY

ANNEX No. 2

EPZ INTERVIEWS BY COMPANY	
Export Processing Zones	
Zip Choloma	
Hanes	24
Monty	32
Best Forms	19
Spring	23
Total Zip Choloma	98
Zip Bufalo	
Hyupsung	25
Fadena Fashions	27
Total Zip Bufalo	52
Zip Inhdelva	
Protexa	11
Mainta	10
Exportex	7
Adriana Enterprise	6
Kil JIn	6
Golden Eagle	10
Total Zip Inhdelva	50
Total for all Export Processing Zones	200
Interviews with businesses	
Formal Businesses	25
Informal Businesses	25
Total Businesses interviews	50
Total Interviews conducted	550

PRICE WATERHOUSE DE HONDURAS
ESTUDIO DE BASE SOBRE LAS ZIP: CUESTIONARIO II - HOGARES EN ZONA DE LAS ZIP

NUMERO DE REFERENCIA

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ANNEX 3 INTERVIEW FORM-COMMUNITY SURV

BARRIO O COLONIA: _____ CASA, CALLE _____

CONTROL DEL TRABAJO

A. CODIGOS RESULTADO:

- 1 = Realizada
- 2 = Rechazada
- 3 = Viv. desocupada
- 4 = Viv. no localizada
- 5 = Incompleta: cita para continuación:

B. PERSONAL PARTICIPANTE:

- Entrevistador: _____
- Supervisor de Campo: _____
- Codificador: _____
- Programador: _____

C. CONTROL DE VISITAS:

No.	Fecha	Hora	Res.
1.			
2.			
3.			
4.			

I DATOS DE LA VIVIENDA Y CARACTERISTICAS DEL HOGAR

Esta sección se llena por observación del entrevistador y por discusión con el jefe del hogar

1. CANTIDAD DE HOGARES EN LA VIVIENDA:

2. TIPO DE VIVIENDA

- 1. Casa o apartamento independiente
- 2. Rancho
- 3. Cuarto en mesón o cuartería
- 4. Barracón
- 5. Casa improvisada
- 6. Local no destinado a habitación pero usado como vivienda

3. MATERIAL PREDOMINANTE EN LAS PAREDES

- 1. Ladrillo, piedra o bloque
- 2. Adobe
- 3. Madera
- 4. Bahareque, vara o caña
- 5. Deshechos
- 6. Otro _____

1. SERVICIO DE AGUA

1. ¿De donde proviene el agua que utiliza?

- 1. Tubería - servicio público
- 2. Tubería colectivo o privado
- 3. Pozo malacate o con bomba
- 4. Fño, reachuelo, manantial, etc.
- 5. Vendedores ambulantes
- 6. Otro _____

¿Como la obtiene?

- 1. Dentro de la vivienda
- 2. Fuera de la vivienda y dentro de la propiedad
- 3. Fuera de la propiedad

ELECTRICIDAD y COMBUSTIBLES

1 ¿Qué tipo de electricidad tiene?

- 1. Suministro ENEE
- 2. Planta privada colectiva
- 3. Planta privada individual
- 4. No tiene

¿Qué combustible utilizan para cocinar?

- 1. Electricidad
- 2. Gas líquido (kerosena)
- 3. Gas volátil (LPG)
- 4. Leña
- 5. Otro _____
- 6. No cocinan

6. SERVICIO SANITARIO

- a. ¿Qué tipo de servicio sanitario tiene?
 1. Inodoro 2. Letrina 3. No tiene (Pase a 7)

b. ¿A qué está conectado?

4. Tubería 5. Tanque séptico 6. Pozo negro

c. ¿Es de uso individual o colectivo?

7. Individual 8. Colectivo

7. CALIDAD DE SERVICIOS PUBLICOS

Opinión sobre la calidad de los servicios públicos que existen en su casa, calle, o barrio y sobre las prioridades para mejorar.
 COND/1 PRIOR/2

- 1. Agua de llave
- 2. Alcantarillado
- 3. Aguas negras
- 4. Alumbrado público
- 5. Luz eléctrica
- 6. Teléfono

7. PAVIMENTACIÓN

- 8. Recoín de basura
- 9. Centro de Salud
- 10. Clínica plan. familiar
- 11. Guardería infantil
- 12. Escuela primaria

/1 Evaluar calidad: MB, B, R, M, MM o NH
 /2 Señalar los cuatro prioritarios para establecer o mejorar, del 1 al 4

8. SALUD Y SEGURO SOCIAL

1. No. de miembros del hogar inscritos en el IHSS: _____

2. No. de miembros del hogar cubiertos por el servicio médico del IHSS: _____

3. Cuando Usted y su familia necesitan ayuda médica, a dónde van, y cuánto tiempo necesitan para llegar desde su casa?

Tiempo para llegar
 (Horas, mins):

- 1. Clínica o médico privado _____
- 2. Centro de Salud _____
- 3. Hospital del IHSS _____
- 4. Clínica de IHSS en el ZIP _____
- 5. Hospital del MSP _____
- 6. Farmacia _____
- 7. OTRO _____

9. TENDENCIA DE LA VIVIENDA

¿En qué caracter ocupan esta vivienda?

- 1. Propietario y esta pagada totalmente
- 2. Propietario y la esta pagando: --- Lps _____
- 3. Alquilada: --- Pago mensual _____
- 4. Cedida sin pago

10. PIEZAS DE VIVIENDA Y HOGAR

- 1. ¿Cuántos cuartos tiene la vivienda? (inc. la cocina pero no el baño) _____
- 2. De ellos, ¿cuántos son del uso exclusivo de éste hogar? _____
- 3. De ellos, ¿cuántos cuartos utilizan exclusivamente para dormir? _____
- 4. ¿Cuántos otros cuartos también se usan para dormir? _____

11. ARTEFACTOS DEL HOGAR

¿Cuáles de los siguientes posee el hogar:

- | | |
|-------------------|--------------------------|
| Equipo de sonido | Estufa |
| Plancha eléctrica | Televisor B/N |
| Televisor a color | Refrigeradora |
| Lavadora | Calentador de ducha |
| Teléfono | Vehículo (no de trabajo) |
| Motocicleta | Máquina de coser |

12. GASTOS DEL HOGAR

En un mes típico, cuanto gastan Ustedes en las siguientes cosas?

- 1. Comida
 - 2. Vivienda
 - 3. Ropa
 - 4. Luz, agua, teléfono
 - 5. Transporte
 - 6. Educación
 - 7. Diversión
 - 8. Pagando deudas
 - 9. Ahorros
- Lempiras

- 163 -

Nombre: _____ Núm. de persona: ___ ¿Autoinformante?: SI NO — no. del informante _____
 Sexo: H M Edad: ___ Estado Civil: ___ Reín. con jefe de familia: _____ Núm. de Serie del Hogar: _____

CARACTERISTICAS DEMOGRAFICAS

1. ¿Cuánto tiempo hace que vive en este lugar poblado o ciudad?
 1. Siempre ha vivido aquí (pase a 3)
 2. Menos de un año
 3. un año o más: número de años : _____

2. ¿En que Departamento, Municipio y lugar poblado vivió antes de vivir en este lugar? (Si vivía en el extranjero anote el nombre del país)

Dopto: _____ | | |
 Mpio: _____ | | |
 Lugar poblado: _____ | | |
 País: _____ | | |

CARACTERISTICAS EDUCATIVAS

3. ¿Sabe leer y escribir? SI NO
 4. ¿Asista actualmente a un establecimiento de enseñanza? SI NO
 5. ¿Cual es el nivel más alto de estudio que cursa o cursó? y ¿Cual es el último año aprobado en ese nivel?
 1. Ninguna
 2. Pre-primaria
 3. Centro de alfabetización (para 4 al 8, señalar último año aprobado: _____)
 4. Primaria
 5. Secundaria
 6. Técnico formal
 7. Superior no Universitario
 8. Superior Universitario

1.1 ¿Aprendió, o está aprendiendo, algún oficio?
 SI NO
 [pase a 6.2] [pase a 7]

1.2 ¿Qué oficio es? _____

CONTINUE PARA PERSONAS DE 10 AÑOS O MÁS

CARACTERISTICAS ECONOMICAS

Durante la semana pasada, ¿trabajó por lo menos 1 hora, sin considerar los que haceres del hogar en la casa?
 SI — (Pase a 10) NO

Aunque no trabajo la semana pasada, ¿tenía algún empleo, negocio, empresa, o finca propia, del cual estuvo ausente por enfermedad, huelga, vacaciones, etc.) y al que espera volver?
 SI NO — (Pase a 16)

¿Por que motivo no trabajó la semana pasada?
 1. Mal tiempo
 2. Falta de materia prima, dinero, etc.
 3. Huelga o paro
 4. Problemas familiares o de salud
 5. Vacaciones, estudios, etc.
 6. Por estacionalidad
 7. Otro: _____

10. ¿Tiene otros trabajos además de la ocupación principal?
 SI NO

11. ¿Cuántas horas trabajó la semana pasada?
 Ocupación principal: _____
 Otras ocupaciones: _____
 Total: _____

12. ¿Cuántas horas en total trabaja normalmente por semana?
 Total de horas: _____

13. ¿Cumpliendo con sus obligaciones de trabajo, estudio, y otros quehaceres, ¿Desea trabajar más horas por semana, y está disponible para hacerlo por un pago o ingreso normal?
 SI NO

14. ¿Cuántas horas adicionales esta dispuesto a trabaja por semana?
 Cantidad de horas _____

15. ¿Por que causa no trabaja normalmente más horas por semana?
 1. Por razones de salud
 2. Por razones familiares o personales
 3. Por que no hay o no consigue más trabajo
 4. Por otra razón: _____

(Pase a 22)

16. Durante la semana pasada, ¿Estuvo buscando trabajo o tratando de establecer su propio negocio o finca?
 SI NO
 (Pase a 18)

17. Aunque no busco trabajo ni trato de establecer su propio negocio o finca la semana pasada, había buscado o tratado en las cuatro semanas anteriores?
 SI NO
 (Pase a 19)

18. ¿Cuanto tiempo tiene de estar buscando trabajo o tratando de establecer su propio negocio o finca?
 1. Menos de un mes
 2. De un mes a un año — [] [] Cantidad de meses
 3. Mas de un año

(Pase a 21)

19. ¿ Cual es su condición actual?
 1. Jubilado o pensionado
 2. Rentista
 3. Estudiante
 4. Realiza los quehaceres del lugar
 5. Incapacitado
 6. Otro _____

20. ¿ Desea trabajar y está disponible para hacerlo?
 1. Si, ahora mismo.
 2. Si en otra época del año
 3. No (FIN)

21. ¿Ha trabajado antes?
 SI NO
 (FIN)

22. ¿Cuanto tiempo hace que labora o laboró en su último trabajo, negocio propio o finca?

1. Menos de un año
2. Un año o más _____ [] [] [] [] (años, meses)

23. ¿Cual es o era la clase de trabajo que realiza actualmente o realizó en su ocupación principal?

_____ [] [] [] [] [] [] [] [] [] []

24. ¿Nombre de la empresa, negocio o finca donde realiza su ocupación principal:

25. ¿Donde se ubica? Municipio: _____

Dirección: _____

26. ¿Qué produce o a que se dedica la empresa?

_____ [] [] [] [] [] [] [] [] [] []

27. ¿Cuánto tiempo le toma cada día para llegar a trabajar?

(Horas, mins) _____

28. ¿Qué medio de transporte usa para llegar a trabajar?

1. Bus
2. Carro privado
3. Taxi
4. Bicicleta
5. A pie
6. Tren
7. Otro: _____

29. ¿Cuánto le cuesta diariamente, ida y vuelta? L. _____

30. En el mes pasado ¿Cuánto fue su ingreso por sueldo, salario o jornal?

Ocupación principal [] [] [] [] [] [] [] [] [] []

Otras ocupaciones [] [] [] [] [] [] [] [] [] []

TOTAL [] [] [] [] [] [] [] [] [] []

31. En los últimos 6 meses ¿Cuánto fue su ingreso promedio mensual por ganancia o beneficios como cuenta propia o como patron en su negocio o finca?

Ocupación principal [] [] [] [] [] [] [] [] [] []

Otras ocupaciones [] [] [] [] [] [] [] [] [] []

TOTAL [] [] [] [] [] [] [] [] [] []

(FIN)

PARA MUJERES ENTRE 15 Y 45 AÑOS

32. ¿Utiliza Usted cualquier método de planificación familiar?

SI _____ [IR A 33] NO _____ [IR A 34]

33. a) ¿Por qué razones planifica?

1. Económicas
2. De salud
3. Religion/moral
4. Otras razones _____

b) ¿Quién decide planificar?

1. Usted
 2. Su compañero/a
 3. Ambas personas
- [IR A 35]

34. ¿Por qué razones no planifica?

1. Económicas
2. De salud
3. Religion/moral
4. No tiene relaciones sexuales
5. No conoce ningún método
6. Temor
7. No puede conseguir métodos
8. Su pareja no lo permite
9. Está embarazada
10. No hace falta si uno es cuidadosa
11. Otras razones: _____

35. Señale cuales de los siguientes métodos de planificación Usted (a) conoce (b) ha utilizado (c) está utilizando:

1. Piladora/pastilla
2. Condones/preservativos
3. DIU (anillo, diafragma)
4. Esterilización: 1) femenina
2) masculina (Vasectomía)

5. Inyección

6. Espuma/crema/jalea/ovulos

7. Ritmo (donde no se mantienen relaciones durante el periodo fértil de la mujer)

8. Retiro (donde el hombre toma mucho cuidado y se retira antes de eyacular)

9. Otros: _____

36. ¿Donde consigue Usted su método de planificación familiar?

1. Hospital/Clinica/Médico privado
2. Centro de Salud
3. Hospital del IHSS
4. Hospital Ministerio de Salud
5. Punto planificación familiar ASHONPLAFA
6. Clinica ASHONPLAFA
7. Partera
8. Farmacia
9. Pulperia
10. Clinica en su lugar de trabajo
11. Otro: _____
12. No sabe/ no recuerda

37. ¿Qué edad es la que Usted considera ideal para empezar a hijos? _____ años

38. ¿Cuál es, para Usted, el número ideal de hijos? _____

39. ¿Ha recibido pláticas de planificación familiar? SI _____ NO _____

40. ¿Ha oído hablar de enfermedades de transmisión sexual? SI _____ NO _____

(FIN)

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13 AHORROS DEL HOGAR

1. Cuántos ahorros tiene el hogar actualmente en total? L. ___

2. En qué forma ahorran?

Señalar cantidad de cada tipo)

- 1. Billetes efectivo _____
- 2. Cuenta bancaria _____
- 3. Ahorro y prestamos (coop) _____
- 4. Prestado a amigo/familiar _____
- 5. Otro: _____

14. INTEGRACION COMUNITARIA Y ACTITUDES HACIA ZIP Y SERVICIOS PUBLICOS

1. Qué tipo de participación tiene Usted u otros miembros de su familia en las siguientes actividades en su comunidad? [señalar el número de miembros del hogar en cada categoría].

Muy Activo Medio Activo No Activo

- a) Deportes
- b) Partidos políticos
- c) Clubes sociales
- d) Patronato
- e) Iglesia/religión
- f) Sindicatos
- g) Grupos de mujeres

2. Qué piensa Usted del impacto de las ZIP en su comunidad?

[Para cada uno señalar: MB, B, R, M, MM]

- 1. Generalmente _____
- 2. Para empleo _____
- 3. Para el medio ambiente _____
- 4. Para servicios públicos: _____
 (a) costo _____
 (b) calidad _____
- 5. Otros efectos: _____

II COMPOSICION DEL HOGAR

NOMBRES DE LAS PERSONAS	RELACION CON EL JEFE	SEXO	EDAD	E S T A D O CIVIL ACTUAL
note aquí los nombres y apellidos de las personas que residen habitualmente en este hogar, en el siguiente orden: 1. jefe/a del hogar 2. su conyuge (sean o no casados) 3. hijos y hijas solteros, del mayor al menor 4. hijos y hijas casados y sus esposos, del mayor al menor 5. nietos 6. padres 7. suegros, hermanos, tíos, cuñados etc 8. trabajadora domestica con dormida adentro 9. otras personas no miembros de la familia.	Anote la relación con el jefe de cada miembro del hogar	M o F	A ñ o s totales (menor a uno = 0)	C = Casado UL = Union Lib D = Divorciado V = Viudo S = Soltero M = Menor
1				
2				
3				
4				
5				
6				
7				
8				
9				
0				

SERVACIONES:

ANNEX 4

SAMPLE FOR COMMUNITY SURVEY

No. DE SEGMENTO SELECCIONADO	BARRIO O COLONIA	TOTAL DE VI- VIEN- DAS POR SEG- MENTO	# DE VI- VIENDAS SELECCIO- NADAS POR SEGMENTO	MANZANAS Y VIVI- ENDAS SELECCIO- NADAS POR SEGMENTO		RESERVA DE MANZANAS Y VIVIENDAS	
				MANZA- NAS	VIVIENDAS	MZ	VIVI- ENDAS
48	COLONIA BELLA VISTA	48	10	5	5,7,8,9,10,11,12, 13,14,15	4	2,8, 9,15
52	COLONIA LAS LOMAS	55	11	12	1,2,3,4,5,6,7, 8,9,10,11	2	3,6 8,9
68	BARRIO EL BANCO	57	11	4	2,6,7,9,13,15,19, 20,23,24,25	1	5,7, 8,13
73	COLONIA SANTA FE	58	12	11	3,5,6,7,8,12,14, 15,16,17,18,19	9	1,3 4,5
96	COLONIA LOPEZ ARELLANO	52	11	49	2,4,6,10,11,12,19 21,23,24,25	48	1,4 22,23
103	COLONIA INES CARRANZA B	51	10	60	2,3,5,6,8,10,13 14,16,17	61	4,7, 9,12
104	COLONIA INES CARRANZA B	53	11	16	1,2,3,4,5,6,7, 8,9,10,11	17	2,4, 13,14
122	COLONIA LA UNIDAD	59	12	22	1,2,3,4,5	28	1,2
TALES		997	200	24	1,2,3,4,5,6,7		3,4

ANNEX 4
SAMPLE FOR COMMUNITY SURVEY

DISTRIBUIDORA MUESTRAL DE
 VILLANUEVA, POR SEGMENTO, MANZANA
 Y VIVIENDA

No. DE SEGMENTO SELECCIONADO	BARRIO O COLONIA	TOTAL DE VI- VIEN- DAS POR SEG- MENTO	# DE VI- VIENDAS SELECCIO- NADAS POR SEGMENTO	MANZANAS Y VIVI- ENDAS SELECCIO- NADAS POR SEGMENTO		RESERVA DE MANZANAS Y VIVIENDAS	
				MANZA- NAS	VIVIENDAS	MANZANAS	VIVI- ENDAS
5	BARRIO LAS FLORES	62	11	1 3 9	1,2,3, 5,2,6, 1,2,3,4,5,	2	1,2, 3,4,
6	BARRIO SAN RAMON	67	12	5 9 12	1,2,3,4, 3,5,6,2, 1,2,3,4,	3	1,2, 5,7
7	BARRIO TEGUCIGALPA	51	9	7	2,3,4,5, 6,7,8,9,10,	3 6	3,4, 1,2,
11	COLONIA MARTIN FAJARDO	56	10	16 18	1,2,3,4, 1,2,3,4,6,7,	14	3,6, 7,9,
26	BARRIO JOSE CECILIO DEL VALLE	62	11	7	1,2,3,4,5, 6,7,8,10,11, 13	2	1,6, 12,14,
28	COLONIA INDEPENDENCIA	42	8	2	2,3,4,5, 7,8,9,15	1	3,4, 7,9,
30	COLONIA INDEPENDENCIA	59	10	5	4,6,7,8,9, 10,12,14 15,19,	17	1,6, 8,10,
31	COLONIA INDEPENDENCIA	58	10	18	1,2,7,8,11 19,20,21, 23,25,	6	7,8, 13,15,
39	BARRIO LA VICTORIA	57	10	37	2,3,4,5,6, 8,9,10,11, 12	36	2,3, 7,8,
43	COLONIA GRACIAS A DIOS	53	9	14	2,3,4,5,6, 10,11,14,15,	16	1,3, 5,6,
		567	100				

VILLANUEVA:

100 VIVIENDAS SELECCIONADAS
 10 SEGMENTOS SELECCIONADOS

ANNEX 4

SAMPLE FOR COMMUNITY SURVEY
DISTRIBUIDORA MUESTRAL DE
CHOLOMA, POR SEGMENTO, MANZANA
Y VIVIENDA

No. DE SEGMENTO SE- LECCIONADO	BARRIO O COLONIA	TOTAL DE VI- VIEN- DAS POR SEG- MENTO	# DE VI- VIENDAS SELECCIO- NADAS POR SEGMENTO	MANZANAS Y VIVI- ENDAS SELECCIO- NADAS POR SEGMENTO		RESERVA DE MANZANAS Y VIVIENDAS	
				MANZA- NAS	VIVIENDAS	MZ	VIVI- ENDAS
1	COLONIA CEDEN	46	9	3	5,12,15,17,20,21, 23,28,34	3	37,39 40,41
7	COLONIA INFOP	45	9	9	1,3,4,6,8,10,12,14, 16	11	2,5, 9,11
9	COLONIA 11 DE ABRIL	52	10	16	10,12,14,15,17,19, 20,21,22,23	15	1,5, 9,10
13	COLONIA 19 DE SEPTIEMBRE	68	14	1	1,2,3,4,5,6,7,8,9,10	4	1,4, 6,7
				6	1,2,4,6		
17	COLONIA MUNICIPAL	55	11	6	8,9,11,12,13,14,15, 17,18,19,21	4	4,7, 11,12
22	COLONIA CARE	66	13	1	1,3,4,5,6,12,13,14, 15,16,17,18,20	2	4,5, 8,12
25	BARRIO SAN ANTONIO	59	12	3	3,5,7,8,10,12,16, 23,25,26,28,29	4	2,3, 13,15
31	BARRIO EL CENTRO	24	5	18	1,2,3,4,5	17	3,6, 8,10
33	BARRIO ABAJO	56	11	4	1,2,3,4,5,6,7, 8,9,10,11	3	3,5, 9,10
34	BARRIO ABAJO	44	9	8	1,2,3,4,5,6,8,10, 11	11	1,2, 4,8
38	COLONIA LOS COCOS	27	5	1	1,2,3,4	6	1,2
				2	1	5	1,3
39	BARRIO LA LURVA	22	4	1	4,5,6,8	5	1,2 3,5

AGE AND SEX STRUCTURE OF SAMPLE POPULATION IN COMMUNITY SURVEY

Age:	CHOLOMA						VILLANUEVA						TOTAL					
	NUMBER			PERCENT			NUMBER			PERCENT			NUMBER			PERCENT		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
	Row %	Row %	Col %	Row %	Row %	Col %	Row %	Row %	Col %	Row %	Row %	Col %	Row %	Row %	Col %	Row %	Row %	Col %
< 5	79	60	139	57	43	13	38	31	67	54	58	13	115	91	206	56	163	13
5- 14	137	148	285	48	52	28	72	62	134	54	46	28	209	210	419	50	50	27
15- 19	62	68	130	48	52	13	26	40	66	39	61	13	88	108	196	45	55	13
20- 29	76	111	187	41	59	18	43	48	91	47	53	18	119	159	278	43	57	18
30- 44	75	95	170	44	56	16	45	45	90	50	50	18	120	140	260	46	54	17
45- 59	40	40	80	50	50	8	15	19	34	44	56	7	55	59	114	48	52	7
60+	18	24	42	43	57	4	15	16	31	48	52	6	33	40	73	45	55	5
Total	487	546	1033	47	53	100	252	261	513	49	51	100	739	807	1546	48	52	100

STRUCTURE OF OUR SAMPLE POPULATION, COMMUNITY SURVEY

ANNEX 5

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LIMA POPULATION, PEA, ACTIVITY RATES AND EMPLOYMENT RATES BY AGE AND SEX. 1988

AGE	POPULATION			PEA			ACTIVITY RATE (%)			EMPLOYMENT			EMPLOYMENT RATE (%)		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
0-9	12,633	6,411	6,222												
10-14	5,491	2,797	2,694	941	801	140	17.1	28.6	5.2	600	579	21	63.8	72.3	15.0
15-29	12,819	5,988	6,831	5,852	4,304	1,548	45.7	71.9	22.7	4,818	3,564	1,254	82.3	82.8	81.0
30-39	5,138	2,452	2,686	3,220	2,317	903	62.7	94.5	33.6	2,944	2,129	815	91.4	91.9	90.3
40-49	3,188	1,548	1,642	1,951	1,480	471	61.2	95.7	28.7	1,818	1,388	430	93.2	93.8	91.3
50-65	3,083	1,593	1,490	1,768	1,481	287	57.3	93.0	19.3	1,642	1,402	240	92.9	94.7	83.6
65+	1,431	688	743	462	393	69	32.3	57.1	9.3	396	356	40	85.7	90.6	58.0
TOTAL 10-64	29,719	14,376	15,343	13,732	10,383	3,349	46.2	72.2	21.8	11,822	9,062	2,760	86.1	87.3	82.4
TOTAL 10+	31,150	15,064	16,086	14,194	10,776	3,418	45.6	71.5	21.2	12,218	9,418	2,800	86.1	87.4	81.9
TOTAL	43,783	21,475	22,308												

Source: 1988 Census and our calculations

PEA = Population economically active
 Activity rate = PEA / Population
 Employment rate = Employment / PEA

Memo item: popin. growth rates 1974-88: urban 4.93% rural 0.06% tot 2.69%

	Real:	Projected:	
	1988	1992	2000
Urban population:	28,703	34,796	51,136
Rural population:	17,075	17,489	18,346
Total population:	45,778	52,285	69,482

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EL PROGRESO POPULATION, PEA, ACTIVITY RATES AND EMPLOYMENT RATES BY AGE AND SEX, 1988

AGE	POPULATION			PEA			ACTIVITY RATE (%)			EMPLOYMENT			EMPLOYMENT RATE (%)		
	TOTAL	*MEN	WOMEN	*TOTAL	*MEN	WOMEN	TOTAL	*MEN	*WOMEN	TOTAL	*MEN	*WOMEN	TOTAL	MEN	WOMEN
0-9	32,961	16,853	16,108												
10-14	14,534	7,273	7,261	2,608	1,934	672	17.9	26.6	9.3	2,174	1,607	567	83.4	83.1	84.4
15-29	27,777	12,960	14,817	13,521	10,120	3,401	48.7	78.1	23.0	11,794	8,798	2,996	87.2	88.9	88.1
30-39	11,341	5,442	5,899	6,933	5,192	1,741	61.1	95.4	29.5	6,382	4,738	1,644	92.1	91.3	94.4
40-49	7,147	3,523	3,624	4,248	3,346	902	59.4	95.0	24.9	3,963	3,110	853	93.3	92.9	94.6
50-65	6,436	3,208	3,228	3,603	2,979	624	56.0	92.9	19.3	3,353	2,772	581	93.1	93.1	93.1
65+	3,392	1,700	1,692	1,542	1,248	294	45.5	73.4	17.4	1,407	1,147	260	91.2	91.9	88.4
TOTAL 10-64	67,235	32,406	34,829	30,911	23,571	7,340	46.0	72.7	21.1	27,666	21,025	6,641	89.5	89.2	90.5
TOTAL 10+	70,627	34,106	36,521	32,453	24,819	7,634	45.9	72.8	20.9	29,073	22,172	6,901	89.6	89.3	90.4
TOTAL	103,588	50,959	52,629												

Source: 1988 Census and our calculations

PEA = Population economically active

Activity rate = PEA / Population

Employment rate = Employment / PEA

Memo item: popln. growth rates 1974-88: urban 7.4% rural 2.5% tot 4.7%

	Real:	Projected:	
	1988	1992	2000
Urban population:	57,198	76,102	134,720
Rural population:	46,390	51,206	62,389
Total population:	103,588	127,308	197,109

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VILLANUEVA POPULATION, PEA, ACTIVITY RATES AND EMPLOYMENT RATES BY AGE AND SEX. 1988

AGE	POPULATION			PEA			ACTIVITY RATE (%)			EMPLOYMENT			EMPLOYMENT RATE (%)		
	TOTAL	*MEN	WOMEN	TOTAL	*MEN	WOMEN	TOTAL	*MEN	WOMEN	TOTAL	*MEN	WOMEN	TOTAL	*MEN	WOMEN
0- 9	10,926	5,569	5,357												
10- 14	4,371	2,239	2,132	691	857	34	20.4	38.3	1.6	762	747	15	85.5	87.2	44.1
15- 29	8,563	4,078	4,485	4,055	3,427	628	47.4	84.0	14.0	3,705	3,121	584	91.4	91.1	93.0
30- 39	3,823	1,923	1,900	2,193	1,864	329	57.4	96.9	17.3	2,116	1,791	325	96.5	96.1	98.8
40- 49	2,137	1,130	1,007	1,238	1,089	149	57.9	96.4	14.8	1,176	1,034	142	95.0	94.9	95.3
50- 65	1,938	990	948	994	921	73	51.3	93.0	7.7	938	872	66	94.4	94.7	90.4
65 +	1,023	530	493	417	400	17	40.8	75.5	3.4	398	383	15	95.4	95.8	88.2
TOTAL 10- 64	20,832	10,360	10,472	9,371	8,158	1,213	45.0	78.7	11.6	8,697	7,565	1,132	92.8	92.7	93.3
TOTAL 10 +	21,855	10,890	10,965	9,788	8,558	1,230	44.8	78.6	11.2	9,095	7,948	1,147	92.9	92.9	93.3
TOTAL	32,781	16,459	16,322												

Source: 1988 Census and our calculations

PEA = Population economically active

Activity rate = PEA / Population

Employment rate = Employment / PEA

Memo item: popln. growth rates 1974-88: urban 4.2% rural 6.4% tot 5.6%

	Real:	Projected:	
	1988	1992	2000
Urban population:	11,410	16,962	23,573
Rural population:	21,371	27,390	44,991
Total population:	32,781	44,352	68,564

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CHOLOMA POPULATION, PEA, ACTIVITY RATES AND EMPLOYMENT RATES BY AGE AND SEX, 1988

AGE	POPULATION			PEA			ACTIVITY RATE (%)			EMPLOYMENT			EMPLOYMENT RATE (%)		
	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN
0-9	21,372	11,067	10,305												
10-14	8,810	4,422	4,388	2,719	1,916	803	30.9	43.3	18.3	2,194	1,543	651	80.7	80.5	81.1
15-29	16,364	7,965	8,399	9,390	6,935	2,455	57.4	87.1	29.2	8,228	6,055	2,173	87.6	87.3	88.5
30-39	7,150	3,482	3,668	4,508	3,373	1,135	63.0	96.9	30.9	4,129	3,082	1,047	91.6	91.4	92.2
40-49	4,282	2,204	2,078	2,704	2,145	559	63.1	97.3	28.9	2,466	1,957	509	91.2	91.2	91.1
50-65	3,737	1,917	1,820	2,207	1,828	379	59.1	95.4	20.8	2,003	1,671	332	90.8	91.4	87.6
65+	2,206	1,138	1,068	1,099	893	206	49.8	78.5	19.3	956	784	172	87.0	87.8	83.5
TOTAL 10-64	40,343	19,990	20,353	21,528	16,197	5,331	53.4	81.0	26.2	19,020	14,308	4,712	88.4	88.3	88.4
TOTAL 10+	42,549	21,128	21,421	22,627	17,090	5,537	53.2	80.9	25.8	19,976	15,092	4,884	88.3	88.3	88.2
TOTAL	63,921	32,195	31,726												

Source: 1988 Census and our calculations

PEA = Population economically active

Activity Rate = PEA / Population

Employment rate = Employment / PEA

Memo Item: population growth rates 1974-88: urban 10.5%; rural 0%

	Real:		Projected:	
	1988	1992	2000	
Urban population:	37,194	54,456	116,731	
Rural population:	26,727	26,727	26,727	
Total population:	63,921	81,183	143,458	

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LIST OF INDIVIDUALS INTERVIEWED DURING THE STUDY

<u>NAME, POSITION, ORGANIZATION</u>	<u>DATE OF INTERVIEW</u>
<u>1. Owners and managers of EPZs</u>	
Eva María de Fúnez, Industrial Relations and Human Resources Manager, ZIP Choloma	29/11/91
Patricia Rosenthal de Fernández, General Manager, ZIP Continental	28/4/92
Sandra Jovel López, Human Resources Manager, ZIP Continental	28/4/92
José Molina, General Manager, ZIP Choloma	29/4/92
Fernando J. Jaar, Vice President, ZIP Villanueva	30/4/92
Tony Medina, Marketing Manager, ZIP Búfalo	7/5/92
Roberto Larios Silva, President, ZIP San Miguel	7/5/92
Nicolas Maloff, President, CHIP	8/5/92
José Mario Hernández, Accountant, INHDELVA	8/5/92
<u>2. Owners and managers of firms in EPZs</u>	
<u>(a) ZIP Choloma</u>	
María Girón, Human Resources Manager, Hanes	4/92
Rosa Hernández, Human Resources Manager, Best Forms	4/92
Salomón Leiva, Manager, Interfashion	4/92
<u>(b) INHDELVA</u>	
Danny Kee, Manager, Seolim Enterprise	30/4/92
Sara Vásquez, President, Adriana Enterprises	29/4/92
Tony Oliva, Owner/Manager, Golden Eagle	29/4/92
<u>(c) CHIP</u>	
Francisco Duarte, Personnel Manager, Sunny Industries	4/92
Roland Ochoa, Administrative Manager, Manufacturas Máxima	30/4/92
Carlos Bonilla, Personnel Manager, Won Chang	30/4/92
<u>(d) ZIP Villanueva</u>	
Victor Tarrab, Manager, Warnaco	7/5/92
	/contd.

3. Owners and managers of export companies outside EPZs

Victor Tarrab, Manager, Warnaco, Zona Libre Puerto Cortés	7/5/92
Gustavo Martínez, Manager, Worth of Honduras, Choloma	8/5/92
Faríd Handal, Owner/manager, Fabrica de Ropa Monte Carlo, San Pedro Sula	4/92

4. Representatives of export promotion organizations and others affected by the growth of EPZs

Mike Soto, Manager, External Relations, CCIC	7/5/92
Executive Committee of CCIC (collectively)	29/4/92
J.D.Herrera, Executive Director, Honduran Association of Maquiladores	6/5/92
Moises Reyes, Manager, Dept. of Overseas Promotion, FIDE	28/4/92
Juan Carlos Turcios, Dept. of Overseas Promotion, FIDE	28/4/92
Brenie Matute de Clamer, Vice President, Information, FIDE	16/6/92
Maritza Alvarenga Gómez, Executive Director, National Association of Small and Medium Industry	6/5/92

5. Providers of public services in the Sula Valley Area

(a) International organizations

Charles Greenwood, Country Representative, IADB	3/6/92
Ned Van Steenwyk, Head of Education and Training Division, USAID	16/6/92
Mario Pita, Head of Office of Housing and Municipal Development, USAID	17/6/92
Angel Napoleon Coca, Human Resources Division, USAID	22/6/92

(b) Officials of the Honduran Government

Adilio Cruz, Regional Director of Social Insurance, Labor Ministry, San Pedro Sula	13/6/92
Ladislau Tarranza, Director, Labor Ministry, SPS	24/6/92
Miladis Soto, Head of Inspectors, Labor Ministry, SPS	24/6/92
Carlos Pérez, Manager, Bond Projects, PRAF	19/6/92
Sayda Burgos, Program of Training, PRAF	19/6/92
Evelín Nieto, Division of Statistics, Ministry of Public Education, San Pedro Sula	23/6/92
Enrique Bonilla, Director of NW Region, National Transport Direction, SECOPT	23/6/92

/contd.

Anacleto Montes, Head of Urban Transport Subsidies,
National Transport Direction, SECOPT

23/6/92

(c) Officials of Honduran parastatal organizations

Rigoberto Castillo, manager a.i. Northern Division, ENEE

23/6/92

Victor Hidalgo, Technical Assistant to the Director,
HONDUTEL, North East Division (San Pedro Sula)

24/6/92

Roque Reyes, Director, INFOP, San Pedro Sula

24/6/92

Carlos Lorenzana, National Director, INFOP

6/92

Derek Ball, Hydrology Division, SANAA

10/6/92

Benjamín Mena, Director, Northern Division, IHSS

11/6/92

Rene Valentín Flores, Finance Unit, N. Division, IHSS

11/6/92

Guillermo Gutierrez, Manager, National Railway

12/6/92

José Antonio Maltez, Marketing, National Railway

12/6/92

(d) Officials of local government

Gustavo Torres, Mayor of Choloma

29/11/91 and 13/6/92

Edilberto Martínez, Mayor of La Lima

13/6/92

Guadalupe López, Mayor of Villanueva

30/11/91 and 13/6/92

(e) Officials of private development organizations

Gustavo Corrales, Management Services for Health

25/6/92

Germán Pineda Leiva, Director, CADERH, San Pedro Sula

11/6/92

Edwin Roberto López, Director, ASHONPLAFA, San Pedro

12/6/92

Mario Mullins, International City Management Assn, SPS

12/6/92

(f) Officials of private companies not elsewhere mentioned

Lizandro Flores Guillén, General Manager, Cowley

Caribbean Transport, Tegucigalpa

10/6/92

Manuel Trejo, Manager, San Pedro Sula, La Metropolitana

Savings and Loans Association

11/6/92

TOTAL : 58 INTERVIEWS