

Industrial Sector
Strategy Assessment

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ECONOMIC PARTICIPATION OF EGYPTIAN WOMEN:

IMPLICATIONS FOR LABOR FORCE CREATION AND INDUSTRIAL POLICY

EXECUTIVE SUMMARY AND RECOMMENDATIONS

Hanna Papanek
Boston University

Barbara Ibrahim
American University Cairo

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EXECUTIVE SUMMARY

The large-scale migration of skilled male workers has created labor shortages that could be met through either labor-intensive or capital-intensive development strategies. The choice between the two will affect industrial productivity and income distribution, two important issues in economic and social development.

Women have long been an underutilized resource in the Egyptian economy. Their greater participation in the industrial labor force could give a substantial impetus to a labor-intensive strategy while also contributing to better income distribution. Increasing the number of adult earners per household is one of the most effective and fastest ways to increase the family income of the poor.

Egypt's measured female labor force is one of the smallest in the world. At 6% of the female population (aged 15 and over), it is a fraction of the female labor forces in African countries (40% on average) and in all developing nations (42%). While Egypt lacks the history of massive female industrial employment characteristic of many industrial nations, Egyptian women have worked side by side with men throughout the growth of industry since the nineteenth century. Today, the female employment tradition of the industrial working class that has accompanied the growth of the public sector is reflected in substantial numbers of women workers in some sectors of industry.

Industrial managers may be leading the way to the greater utilization of women workers by changing some of their hiring policies but the demand for female labor is still greatly exceeded by an ample supply. When a public sector electronics firm on the southern edge of Cairo advertised 30 positions for unskilled production workers, 400 women lined up at the factory gate the next morning. Managers at a textile mill in Helwan report a 5:1 ratio of female applicants to advertised positions as production workers. Private enterprises report a steady stream of female applicants for production jobs.

The ample supply of female labor is not balanced by an effective demand for women workers. The female labor force, according to official statistics, has not grown as a proportion of the total labor force in the last 20 years, nor has it increased as a proportion of the female population. The nature of demand, however, appears to have changed significantly as evidenced by the changing educational and occupational composition of the measured female labor force. In 1976, 47% of women enumerated as "economically active" had high school educations or better, compared with 12% in 1960; the labor force share of less educated women had declined by half.

Developing an effective demand for women workers from all walks of life clearly involves the interests of the whole society. All ultimately pay the costs and reap the benefits of prevailing employment policies. Increasing women's chances for regular employment -- especially among the less educated -- involves wider economic and social transformations and cannot be viewed merely as a short-term remedy to keep jobs open for men until migrants return. Women's increased participation in the economy, at all levels of educational attainment and from all classes, would represent a long-term alteration in the composition of the female labor force and could reverse trends unfavorable to the poor that have developed over the last few decades.

The experience of other nations shows what can happen when women workers are treated as short-term alternatives for male labor. In the United States, the massive hiring and later rapid dismissal of female industrial workers at the time of World War II was followed by the "baby boom" of the 1950's. This is a development Egypt cannot afford. Women workers must be integrated into the industrial workforce in such a way that they can stay. Employment policies in East and Southeast Asia have led to widespread discontent with the unacceptable consequences of hiring only young single women and discriminating against older married women workers,

But increased employment for women in industry is not simply a matter of locating female labor pools but also of developing viable measures to overcome existing obstacles. Two major barriers are: (i) fears that higher costs are invariably associated with female workers and (ii) a growing tendency to place a premium on

formal education as a prerequisite for female, but not male, employment.

It is believed that women workers are costlier to employers because of legal restrictions (on job types and working hours) and social costs (child care maternity leaves) associated especially with married women workers. Some managers also fear that married women, who now comprise about half of all female production workers, will have higher rates of absenteeism than single women or male workers.

Under present conditions, the actual facts do not support these fears. Men are absent from their jobs as frequently or more often than women because of second jobs and an active search for better paid alternative employment. Men leave their jobs more often than women and certainly are more likely to emigrate, which takes them out of the Egyptian labor force for several years. They may never return to the plant where they were trained. As more women stay on the job after marriage and child-bearing (especially in the public sector, where they are not forced out by demands for excessive overtime) their job tenure in the plant equals or exceeds that of male workers.

Child-care facilities cost employers far less than the bonuses many employers now pay to keep skilled male workers. In effect, providing child-care facilities at the plant or assisting workers with payments for child care away from the plant is one of the cheapest methods to create an effective workforce. At a maximum, an employer would pay LE 7.50 per month to a mother of three children under 6 placed in a neighborhood facility. A bonus of one week's extra pay per month is becoming standard practice to keep a male worker. A moderately skilled male worker with 5 years experience and some overtime can expect to earn about LE 12-15 a week. A bonus for him would be twice the cost of child-care subsidy payments at their maximum and not many women workers would require them at this level.

Higher rates of female industrial employment also provide other benefits not usually considered in industrial planning and site selection. Women who live in cities, around factory sites, and in new industrial developments are already

using the urban infrastructure (housing, roads, schools, utilities, police). This infrastructure costs at least LE 4,000 per household, according to one estimate. An additional worker from the same household incurs no significant incremental infrastructure costs and represents a very large saving compared with bringing in an additional male worker and his family.

Industrial workers often resist the move to new factory sites or satellite towns, in part because of financial losses incurred by other family members who have jobs or informal sector earning opportunities. An experienced seamstress with her own machine and clientele can now earn LE 40-80 per month; young girls who sew collars or buttons can earn LE 10-20. If regular employment is provided to women in new industrial sites, this could be a significant incentive to move. Garment industries, located in new areas, would be especially relevant to provide employment for skilled women who may not have worked in industry before. Vocational training programs for women who already have sewing skills but may be uneducated could benefit both workers and employers but cost only a fraction of the infrastructure costs for an additional male worker. Sewing machine ownership is particularly frequent in families of industrial workers who live in Industrial Workers Residences and may indicate high levels of skill.

To be sure, women's employment in industry is not in accordance with middle and upper-class norms in Egypt but small cohesive subcultures also make their own norms. The industrial working class has a well established tradition of female employment, dating back several decades. Men often prefer girls with employment experience because a wife who can help earn is an asset to the family.

While the typical applicant for a job in industry may be young, unmarried, and poorly educated, more than half of all production workers in 1976 were married, divorced or widowed. This shows a high propensity to stay on the job, unlike the practice in other countries of dropping out at marriage and returning when children are in school. Prejudice against hiring (or rehiring) older women is still very strong in Egypt. Early retirement (possible at 45 in the public sector) motivates

many women to keep their jobs.

Rising rates of female unemployment also indicate an ample labor supply. Younger women now expect to enter the labor force and register as unemployed when they cannot find work, although long waits for government-guaranteed jobs to graduates also increase unemployment registrations.

Female unemployment can be expected to rise further, unless demand for women workers is expanded, especially for the less educated. Drop-out rates from primary school have begun to rise again for both boys and girls. While uneducated men still have an important place in the labor force, the opportunities for regular employment are declining very sharply for uneducated females. The scope of the drop-out problem can be indicated by the fact that the number of females who have dropped out of primary school in the eight age cohorts now reaching the labor market (ages 15-22) is greater than the total size of Egypt's recorded female labor force. Many more of these young women may have dropped out of school after primary school.

Rising school drop-out rates also indicate the importance of regular employment for adult females. In families where more than one earner is needed, children may have to leave school and go to work if they can find employment more easily than adult women and if they are better paid than their mothers.

The growing emphasis on educational qualifications, however, is the most serious obstacle to increasing the regular employment of less educated women. While these women may have opportunities to earn in irregular jobs or in the informal sector, their employment in the organized sector of the economy is limited by rising educational certification requirements, even for jobs that have traditionally been available to uneducated women, such as production work in industry. The ample labor supply is one reason for rising certification requirements but it is a short-sighted move on the part of employers with serious consequences for the family incomes of the poor and income distribution generally.

Egypt, like many other nations, is caught in a peculiar dilemma with respect to women. As a result of great progress in female educational participation in recent years, an increased supply of educated women has come into being in a society and economy not yet fully prepared to give them a place commensurate with their needs, expectations, and qualifications. The urgency with which they seek such a place is fueled by the economic pressures experienced by the middle class, to which many educated women belong.

At the same time, the large majority of uneducated women lose access to customary earning opportunities because some of their work has been replaced by technological innovations, jobs traditionally open to them have been "upgraded" to take advantage of a more educated female labor force, and there is little overall increase in the demand for female labor. In 1976, about 11 million Egyptian females, aged ten and over, were illiterate or could only read and write, representing about 86% of the female population.

The educational and employment policies of the last few decades have stressed the labor force utilization of highly educated males and females, primarily through government guarantees of employment to graduates of universities and some vocational secondary schools. While this effort has contributed to much greater educational participation among women, in 1976 still only 5% of females (aged 10 and over) had completed high school and university educations. Yet from this tiny sector of the female population came nearly half (47%) of the measured female labor force. This does not mean that "working women have become more educated" but that a new cohort of educated women have taken jobs that earlier generations of women did not seek.

Uneducated women seem to have dropped out of the labor force, or at least out of the labor force enumerated by official statistics. If uneducated women had maintained the same level of economic activity as in 1960, the 1976 Census would have enumerated about 560,000 of them in the labor force instead of the 300,000 that actually appear. What has happened to the rest? Although one cannot

be absolutely certain, in the absence of more detailed studies, less educated women with a continuing need to earn have probably found opportunities in the informal sector, in irregular jobs outside the reach of labor legislation intended to protect the wages and working conditions of all women, and in self-employment. These workers would be less likely than regularly employed persons to appear in official employment statistics, especially in view of the serious problems, noted world-wide, in obtaining accurate information about women's economic activities. It cannot be assumed that these women have stopped working and earning simply because they no longer appear in sample survey and census data.

The measured female labor force, however, has been transformed in terms of its educational and class composition in the short space of two decades while the male labor force has undergone only comparatively minor changes. Two disparate trends characterize recent changes. As more of the country's tiny proportion of educated women move into modern sector employment, less educated women, who are still the great majority, lose access to jobs. The two groups are clearly not directly competitive with each other for the same jobs but less educated women are adversely affected by an emphasis on educational credentials that favors the more educated. In view of an ample supply of labor to industry, for example, managers raise certification requirements to simplify hiring.

The strong emphasis on formal education as the major pathway to female employment in regular jobs is now an obstacle preventing the full utilization of less educated women, particularly in industry. Strong education-employment linkages are discriminatory against the poor, because it is among the poor that less educated females are most numerous. Although education is free and, by law, open to citizens irrespective of sex within a framework of equal opportunities, not all families can avail themselves equally of free education. Nor is education equally available at different class and status levels, in part because the jobs poor people do have never required much schooling. Families have few incentives

to invest in female education, if they are concerned about future employment, unless jobs are available to girls who have completed the levels of education their families can afford. Under conditions where demand for female labor is concentrated on women with higher levels of education, families who cannot aim that high may become discouraged altogether.

More education for Egypt's women is, of course, a matter of highest importance to the society. If the lack of demand for women with low or moderate educational attainments in the economy is a factor in depressing family incentives to educate their daughters, remedies are needed that would encourage growing educational participation.

Providing better access to regular employment for less educated women, from the poorer sectors of the population, may be an important step in this process, in addition to the reasons already stated. Two steps are needed to improve employment possibilities in industry: (i) vocational training programs specifically designed for less educated women and in a specific industry and (ii) an expansion of child-care facilities, both in plants and residential neighborhoods.

Existing vocational training programs run by the Ministry of Industry annually enroll 8,000 students in centers serving specific industries. These courses were exclusively for males, even in industries employing many women (electronics, food, textiles) until late 1981, when the first training program was set up for 60 young women in electronics.

Vocational training courses in technical and commercial secondary schools entitle graduates to government-guaranteed employment and are open to boys and girls. But in 1979, for every female student in a technical school there were 15 boys; teaching staffs were all male. The strong male bias is out of proportion with actual female participation rates in several important industries.

Among production workers as a whole, females are better educated than males in the same occupation. This makes them especially good candidates for vocational

training courses, especially in plants with many women workers and where experienced female instructors can be found. Since schools are often "foreign territory" for less educated persons, training courses conducted in the plant have better chances of success than courses outside. Workers with family responsibilities also cannot be expected to take on the additional burdens of courses outside working hours and at some distance from home and workplace. Guidelines for training programs could be based on similar programs established elsewhere in the region and in several industrialized nations attempting better integration of women workers into the industrial workforce.

Expanded and improved child-care facilities also provide opportunities for positive social interventions and are not merely conveniences to employers and workers. As the experience of many other nations has shown, child-care centers can improve the health and nutritional status of children, especially among the poor. Better survival rates may influence parents to plan for smaller families. High quality child care facilities can also improve children's later school performance and thereby enable more children to finish school. Drop-outs caused by poor school performance could be significantly diminished.

The wider social significance of both vocational training and child-care would justify Government subsidies for these programs, especially since additional women workers from the same household represent substantial savings in infrastructure costs. Employers willing to take on more women workers and who would support the establishment of vocational training programs (preferably in-plant) and child-care facilities could receive incentive payments enabling them to expand their female workforce as rapidly as possible.

An expansion of effective demand for women workers in industry, coupled with measures to decrease existing barriers to employment, is the key to rapid implementation of a larger role for women in a labor-intensive industrial strategy. As the supply of female labor has grown, women from all levels of education

and various class backgrounds have entered the labor force. Women have always had to work and earn among the poor but the labor force entry of women from other classes is a more recent phenomenon. If this widening of the female labor pool is not accompanied by a corresponding increase in demand for women workers at all levels, seriously adverse effects can be expected for income distribution, productivity, and cleavages among population sectors.

RECOMMENDATIONS

I. General Recommendations

Expanded employment opportunities for women in industry, especially drawing on the skills of less educated females, can benefit industrial productivity, improve income distribution and societal welfare. But unless access to jobs is coupled with adequate compensation, acceptable standards of health and social dignity, and support services, many women might be better off with the informal earning opportunities they have already found. Investments in female job creation are not recommended unless they are linked to a corresponding program in which existing deficiencies in support programs can be remedied and their functions improved and expanded.

Industrialization has undermined women's traditional economic roles in many other nations. The development of increased employment opportunities for women in Egyptian industry needs to recognize the effects of industrial expansion on women's existing skills and earning opportunities. For example, a greatly expanded garment industry aimed at local markets could eventually displace self-employed seamstresses, which is currently the largest category of production work for women in Egypt. Women must be trained and encouraged to apply their skills in new industrial settings but there is a real danger that they may be earning less than self-employed seamstresses can make. The trade-offs involved in the development of a ready-made garment industry, for example, should be

examined in light of the effects on displaced workers with traditional skills. Precise information about the economic activities of such workers is often hard to come by but they are also neglected by social scientists and planners because women's income contributions are often considered to be insignificant. Feasibility studies for planned industrial expansion should, therefore, include researchers from disciplines where relevant work has been done on these issues and who could assist in the evaluation of these aspects of industrial growth.

A. Four alternative approaches to expanding female industrial employment

We have identified four somewhat different options in seeking to expand women's participation in industrial work. These options are not exclusive but complementary although each would involve a somewhat different policy approach. We recommend that they be considered in terms of the maximum benefits to be derived from a labor-intensive industrial strategy under conditions that are socially and economically acceptable to the population involved.

(i) Strengthening the status quo: this involves identifying sectors of industry with the highest current concentrations of female workers, especially those consistent with national priorities for industrialization (food processing, electronics, engineering products, textiles and pharmaceuticals). The capacity of a sector to absorb women workers should be considered in investment decisions because of its potentially favorable consequences for income distribution and productivity.

(ii) The female replacement strategy: this would involve supporting efforts already under way in some industries where scarce male workers are being replaced by females. This strategy would involve identifying existing skill shortages in specific industries and supporting efforts to train women workers to meet needs in specific skill categories. All of the building trades currently meet the criterion of skill shortages that could be met by women workers; skill areas in metal working, electrical motor repair and chemical technicians are also included.

(iii) The "women are especially good at this" strategy: this implies identifying types of industrial skills shown to match female aptitudes. Industries

that make good use of these skills can be considered favorably in investment decisions, with the proviso that their plans for expansion continue to make good use of women workers and do not replace them with sophisticated machinery run by a few workers. Examples include optics, electronics, printing, garment-making.

(iv) A strategy of greater flexibility in work plans and management:

if adopted, this strategy could enhance chances of success in the three previous options. Women workers are currently forced to combine two work schedules (home and job) under conditions of poor infrastructure and consumer services that make this very difficult. Communications and transportation problems in urban Egypt create special problems in getting to work while assuring the well-being of children. Greater management flexibility in the application of existing customs and laws to the timing of shifts for women could be of special importance in maintaining high productivity. Child-care centers must always be considered in conjunction, i.e. women's factory shifts must correspond to children's shifts in schools and centers. These adjustments should be well within the management capacities of Egyptian enterprises, but they might be facilitated by conferences and management services in which these issues are considered in a straightforward and productive manner. Funders are also encouraged to support demonstration projects for innovative work arrangements.

B. Formal education as the only route to a job: The dual-needs approach

We strongly recommend that USAID educational policy consider the importance of developing alternatives to formal schooling as the primary route to employment for women. Our report documents the effects of current certification requirements on that part of the population that cannot afford long years of schooling. While males still find a place in the labor force, many uneducated women have problems in obtaining regular employment.

Support for educational projects should follow a dual-needs approach that not only (1) supports formal education and the incentives that ensure high levels of participation but (2) supports the development of alternative methods that meet

the very different needs of large sectors of the population on their way to regular employment.

On-the-job training programs, short vocational courses, out-of-school skills training programs for the poorly educated, skills upgrading courses for older workers, skills training linked to future employment plus basic literacy on the non-formal education model are among the approaches that would fit into the dual-needs approach to education and employment. (Vocational Training is discussed in Chapter 6.)

The Ministry of Industry should be fully supported in its intentions to open short-term industrial skills courses to older married women. HIPCO's experiments to open its training programs to girls regardless of certification are also deserving of support and wider publicity.

C. Urban resettlement and jobs for women

The wives and daughters of industrial workers often earn part of the family's income through self-employment (seamstresses, tricot knitters) or in a variety of activities in the informal sector. Their clienteles and business networks are closely tied to the residential area in which the family lives. Male factory workers are far less dependent on these neighborhood relationships and can move more easily to a job in another location. Studies in other nations demonstrate that worker reluctance to move may be tied to anticipated income loss by others in the family.

Since women's informal earning activities tend to be thought of as "egg money" that the family could do without, and since this work rarely shows up in official statistics, these activities are often neglected by planners. Ethnographic studies of urban Egyptian neighborhoods show that incomes earned by women are used in large part for children's and household expenditures and that an independent source of income strengthens the woman's leverage in family decision-making, which could have important implications for family planning programs.

We therefore recommend that USAID pay particular attention to developing a mix of industries in new areas whose development is being considered for funding so that employment chances for both men and women will be available.

D. Savings on urban infrastructure

We recommend that the employment of women be evaluated in terms of the costs of urban infrastructure in new and existing industrial areas. Additional workers from a household already settled in the area incur virtually no additional infrastructure costs in comparison to an additional worker and his family. This re-evaluation in terms of the savings associated with increased female employment would make it possible to gain a new perspective on the social costs believed to be associated with expanded female employment and the costs of special vocational training possibly required by new workers.

II. Project Recommendations

(1) The Shared-Year Work Program for Women in Industry:

To attract young women into technical production jobs, an apprenticeship training program could be developed that meets the needs of young women still in school and women workers whose school-age children are out of school for five months of the year, creating serious child-care problems. This program, developed on the "mother-daughter" model of traditional training in important skills, could be Egypt's unique contribution to the solution of world-wide problems and help women to perform their dual obligations to their families and their jobs.

The Program involves sharing one regular production job between two workers on a 5:7 months basis. The regular job holder (usually an older woman) would retain her rights to the job and to her pension. Her wages and production bonuses would only accrue to her during the 7 months she is on the job. She would retain full seniority and entitlement to seniority raises. Her pension costs could be met out of savings from the lower wages paid to the younger worker during her 5 month tenure on the job. The younger woman, usually a teenage girl still in school, would have temporary job status with no rights to the job beyond the 5 month period. Ordinarily, she could not hold the job for a second year but this would be subject to review. The younger woman could conceivably be the daughter or other relative of the older worker or of other plant employees. Her working

period would entitle her to some sort of formal recognition, such as a letter or a diploma, but it would be best if this working period could be linked to continuing education at a vocational training school or other institution. This would discourage the younger worker from dropping out of school.

A major advantage for teenage girls would be the opportunity of learning production work and industrial practices at first hand. There would need to be sufficient overlap between the older and younger worker to assure training and continuity. When minimum age levels for employment are raised to age 15, this program would provide apprentice opportunities for younger women within the organized sector. At the end of the 5 month period, the job reverts to the regular worker. When her children no longer need her during school holidays, she could elect to drop out of the program.

Employers who utilize large numbers of relatively low-skilled women in production would benefit from the program on two counts. Productivity could be maintained at high levels, since single girls have better records on absenteeism than any other group of workers. One of the main sources of low productivity among married women workers (during summer holidays) would be eliminated. Employers would also benefit from the opportunity to draw on the most skilled and promising of the young trainees for future employment, once schooling and training are completed. There is little doubt that many of the bright girls now being channelled into clerical jobs would respond favorably to opportunities for advancement in technical jobs in industry.

The administrative burden of the Shared-Year Work Program would be well within the capacities of most enterprises. Government or private subsidies might be needed to get a demonstration program started and to evaluate its impact.

We recommend that USAID consider funding an exploratory feasibility study to evaluate how such a program would suit the specific needs and conditions of Egyptian women workers and employers.

(2) Skills Training in Construction Finishing:

The construction trades are currently an area of serious shortages of skilled workers. High levels of male migration and a building boom have combined to drive up wages and shorten the period of apprenticeship. Significant deterioration of work standards has been the result, especially in finishing, e.g. ceramic tile installation, plumbing, electrical finishing, decorative plaster and wood work.

Women's proven manual dexterity and attention to detail make them potentially well suited to these tasks. Unskilled female labor can already be found on construction sites, in earth removal and related tasks. We strongly recommend programs to train young women in the skills where shortages are most apparent, modelled on the apprenticeship program in carpentry described in the report (Section 6.5, Chapter 6). Ministry of Industry Training Centers are well equipped for such programs but lack female instructors.

After training, women workers should be placed initially in public sector or cooperative building companies, where there are legal protections and adequate supervision. Eventually, they can be deployed to private work sites as female teams or pairs. Early trainees would eventually become on-site supervisors and trainers.

(3) Survey of Women Workers in Industrial Establishments:

In our report, we note frequent inconsistencies and errors in data sources dealing with women workers. Census figures appear to be out of line with observations made in field studies. In the absence of better information about women workers, and about women's economic activities more generally, it is difficult to develop an employment policy that would provide maximum benefits to Egyptian industries and Egyptian workers.

We therefore recommend that a survey of women workers in industry be undertaken, beginning with surveys in enterprises known to employ large numbers of female workers. Sample surveys of private enterprises could supplement a census of workers in public enterprises. For very small or single-person enterprises,

data from the Michigan State Survey of rural small industry could be used for rural areas. The particular focus of the survey should be: recruitment, wages, working conditions, and support services (particularly child care). No systematic information is currently available to support adequate planning for better services.

In connection with this survey, similar recent surveys conducted in other countries of the region would be particularly useful to suggest guidelines and procedures appropriate for Egypt (e.g. a 1980 survey conducted by the Government of Morocco, Enquete sur les besoins en formation professionnelle du personnel feminin).

(4) On-the-job training programs for women production workers without certification: In our report, we have argued that excessive emphasis on educational certification requirements for production workers discriminates against the poor, who cannot afford long years of schooling. As part of an expansion of employment opportunities in industry for women, special efforts should be made to make it possible for less educated applicants to be accepted in a job with the proviso that they participate in on-going general education programs. Literacy programs currently exist in industry but are in need of upgrading. This program should be developed and designed with participation by the workers themselves, with the assistance of educators to include basic literacy and numeracy, but also relevant issues of consumer awareness, health, industrial safety, as these issues are articulated by workers. Sessions should be held on work premises. It would not be useful to require workers to attend school away from the premises.

A useful model for the development of such factory-specific programs for women workers would be the non-formal education programs developed by and for rural women in many parts of the world, including Africa, the Caribbean and southern Asia. Women who are participating in these programs help to design the curriculum.

Older workers should naturally participate in the program as teachers but also in order to upgrade their own skills. One of the consequences of increased emphasis on educational certification in hiring is that older workers with years

of experience but little formal education cannot make the fullest contribution to productivity in many instances. Involving them in both learning and teaching would take advantage of what they know. The case study of the furniture factory (Section 6.5) shows this process in action.

While we are strongly in favor of expanded female education and efforts to improve female literacy, it is also clear that literacy is not always a prerequisite for effective industrial work. Nor will the exclusion of illiterate workers from employment motivate them to return to school, since they are usually past the traditional school age. For instance, if managers require a primary school certificate for employment as a packer ("so the workers can tell the writing is not upside down") the workers' education is not being well utilized. It is much more likely that managers, who are themselves educated, prefer workers who have already undergone the time and space discipline of the schoolroom.

We recommend that USAID consider ways to extend support for the development of on-the-job training programs specifically for female production workers without certificates. Planning for these programs should involve women workers themselves, along with shop-floor supervisors, perhaps also managers and trade union persons known to be supportive of women workers. They should be developed and tested in only one factory at a time.

Where women are to be introduced onto complex machinery or production processes, it may be less risky to select seasoned workers for additional training, even if they lack certificates. In present practice this rarely happens. Workers with long experience have few avenues of advancement, while inexperienced but better educated new workers are trained for difficult tasks. Skills and aptitudes need to be less rigidly defined in terms of certification or age.

(5) Child-care:

In Egypt, the care of children is widely recognized to be a collective responsibility shared by the society as a whole. Child-care programs for women who hold jobs can, therefore, build on a very positive basis. But no nation in

the world has yet fully met the child-care needs of workers, even though decades of effort have been committed to this goal in nations with very high levels of female labor force participation and a strong political will to implement such programs. It is very clear that this is a costly and difficult task to do well. It is made more difficult by the widespread belief that mothers who hold jobs outside the home while their children are small have a disruptive effect on family life. There is another side to this issue. Poverty is even more disruptive. When mothers must earn because the family is poor, then having a regular job is a positive contribution to the well-being of the whole family. A mother with a regular job often has more time for her better-fed children than a mother who must hunt up her income through irregular work from day to day.

Among the supporting arguments for an expansion and upgrading of child-care facilities, we include the following points (see Chapter 7):

- (i) women who opt for longer job tenure often limit their fertility
- (ii) good quality child-care can improve school performance later
- (iii) good quality child-care can improve health and nutritional status
- (iv) adult women enabled to take regular jobs with child-care facilities contribute to family income and improve income distribution
- (v) welfare costs can be lowered if women who are primary earners can obtain regular jobs with child-care facilities.

We therefore recommend that USAID consider supporting a small-scale but concerted effort to develop several alternative plans for in-plant and neighborhood child-care centers for industrial workers. Funding for such demonstration centers could be linked to plans for industrial expansion. In resettlement areas, child-care centers should be closely linked to plans for attracting workers with families with jobs for women. The development of these plans must involve the women concerned as well as Egyptian professionals sensitive to child care issues.

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CHAPTER 1 : MORE WOMEN WORKERS FOR EGYPTIAN INDUSTRY?

1.1 Issues and Policy Implications

Contrary to widely accepted ideas, women in Egypt today are seeking industrial employment in far greater numbers than there are jobs available. This supply of female labor represents an underutilized resource in Egypt's industrial development, at a time when managers also complain that the supply of skilled male workers is low and unreliable. But this new reality is often far ahead of general perceptions about women's proper place in the Egyptian labor force.

When a public sector electronics firm on the southern edge of Cairo advertised 30 positions for unskilled female production workers, 400 women lined up at the factory gate the next morning. In the Delta, the manager of a food processing plant reports 2 female job applicants for every available position. Managers at a textile mill in Helwan report a 5:1 ratio of female applicants to advertised positions as production workers. To eliminate excess applicants at an electronics firm in Alexandria, personnel officers still use "psychological tests" for manual dexterity although these tests have long since been discarded by this international company in other nations, where applicants are fewer.

Managers' attitudes toward women workers are also changing. For instance, the manager of a public sector glass factory in northern Cairo constantly faces the turnover of skilled and unskilled male workers. He now prefers to recruit and train female production workers. This is a startling reversal of his practice only five years ago when he avoided hiring women. This manager calculates that he cannot afford to train young men on complicated

production processes because they are too likely to emigrate or to take a job in a private sector firm after he has trained them. Similarly, the personnel manager of a garment factory in Alexandria reports a preference for female production workers. Especially if they are young and single, he reports, women are more reliable and have lower rates of absenteeism.

In short, some industrial managers are taking a new look at women workers as skilled male workers become harder to find and keep. This is an important historical moment for Egyptian industry. Will managers respond to shortages of male labor by installing labor-saving machinery, foreclosing future employment possibilities for a growing population? Or will they reconsider the ideas and practices that have kept Egypt's measured female labor force one of the smallest in the world and industrial employment the prerogative of a small group of working-class women?

Women as industrial workers in Egypt have a long history. Since the start of Egypt's industrialization in the nineteenth century, they worked alongside men, often under appalling conditions. Nevertheless, industrial employment is not widely recognized as "suitable" for women in Egypt, except in that small sector of the population in which both men and women find work in industry acceptable and even desirable.

Egypt also lacks the historical experience of many highly industrialized nations, in which women constituted the backbone of the industrial labor force (as in textiles and garment manufacturing) under highly exploitative conditions. Nor is Egypt currently among the nations that have attracted the "run-away" shops typical in Central America and the large multinational enterprises (e.g. electronics) in Southeast and East Asia.

Nevertheless, Egypt's female industrial workforce is larger than is commonly believed. The families of male industrial workers, especially those

living in Industrial Workers Residences near public sector factories contain many women with past experience as production workers. Young women from these families often expect to join their brothers and fathers in factory work, more often than not marrying a fellow worker. This group constitutes an important pool of female labor to Egyptian industry and represents a possible seedbed for the development of a highly motivated female workforce for industrial expansion. Textiles, pharmaceuticals, electronics, and garment making are among the sectors employing the largest numbers of Egyptian women as production workers, although estimates vary widely of the total numbers involved.

In the broader context of Egypt's industrial development, the employment of more women workers in a wider range of occupations may appear to be a small matter. Yet -- as we argue in this report -- in spite of the relatively small number of women now working in industry, female industrial employment is not a minor issue. An analysis of women's present and potential participation in industrial work leads to the heart of several key issues in Egypt's economic and social development.

(1) Increased female participation in industrial production, if coupled with adequate on-site training programs, could make a substantial contribution to industrial productivity by providing a stable supply of skilled workers at a time of great instability in the supply of male workers. The supply of female labor to industry is greater than commonly assumed, especially if measures to mobilize it do not concentrate unduly on the formal system of education but develop alternatives, such as vocational training, more suited to the background of potential workers.

(2) Changing perceptions of women workers could be important elements in the development of a labor-intensive employment policy, which will be crucial in forestalling major social and economic dislocations in the future, when male emigration slows down. This will require changes in the demand

for women workers, based on practical experience in new occupations, the success of training programs, and the willingness of management to promote women to higher-level jobs. The process will also require some renegotiation of the ways in which enterprises and government now share the social costs of female employment.

(3) An additional worker in the same household incurs no additional infrastructure costs of industrial expansion and relocation. According to one estimate, infrastructure costs are now at least LE 4,000 per household. Women who live in urban areas already use the existing infrastructure (housing, roads, schools, utilities, police). Costs may be even higher in newly established sites than in existing urban areas. Providing employment for additional family members in a household already settled in the area means a saving of virtually the entire infrastructure costs incurred by an additional male worker and his family who moves to the area.

(4) Worker reluctance to move to new cities might be overcome more easily if employment opportunities are provided for adult women as well as men. Relocation and development plans often overlook the economic losses sustained by workers' families in the event of a move. The social networks of settled urban neighborhoods provide not only important social resources but also many economic opportunities. When a seamstress loses her neighborhood clientele because her husband's plant is moving, and the family must move with it or he loses the job, the loss of her earnings may be an important factor in the family's decision. But these losses might be offset by the provision of suitable employment for women in the new location. Lack of attention to women's economic activities in the informal sector, largely unrecorded in current economic statistics, may lead planners to overlook this issue.

(5) Improving women's access to regular employment in industry could result in more equitable income distribution. Increasing the number of earners per household is the most rapid and effective means of improving the economic position of the poor in the short run. It is also among the poor that the economic contributions of women and children are already most frequently required. Low returns to labor mean that a family cannot survive on the earnings of adult males alone.

Yet Egyptian Census and Labor Force Sample Survey figures document a decline in labor force participation among uneducated women accompanied by increased modern sector employment among more educated females. This points to an increase in income inequality among those classes where less educated and more educated women are to be found, namely the poor and the middle or upper classes.

If households depend on women as primary earners, problems are even more serious. On average, women's wages in Egypt are nearly 30% lower than men's (G.Papanek Overview). Given prevailing mortality rates and age differences between husband and wife at the time of marriage, widowhood must be anticipated as a distinct possibility in the lives of many Egyptian women. Even if it is the cultural ideal and social expectation, widows cannot always be supported by their families. There are many widows and divorced women among production workers.

As noted in our chapter on Education (Chapter 5), the employment of adult women should also be seen as a major strategy to reduce the labor force participation of children and break the cycle of poverty associated with currently rising drop-out rates from primary school. Since child labor is most likely to occur in poorer families, this is yet another aspect of the relevance of female employment to policies of income distribution.

(6) The role of formal education in female labor force participation presents particularly complex problems to policy-makers and is, therefore, stressed in this report.

Census figures show that the measured female labor force has been transformed in terms of its educational composition in the last twenty years. Nearly half of all "economically active" women enumerated in 1976 had been educated to levels of high school and above. But only about 5% of all females (aged 10 and over) had achieved these levels.

It is therefore not accurate to say that Egypt's women workers are "becoming more educated" but rather that a new, more educated cohort of workers has entered the labor force.

However, if the growth of female employment becomes confined to "education-dependent" occupations, this would signal a pattern of development that is sharply discriminatory against the poor, especially since the poor are particularly dependent on women's and children's contributions to household income. Most cannot afford long years of education for daughters.

From this perspective, the declining labor force participation of uneducated women should be a cause of very great concern. While the proportion of illiterate and "read and write only" females in the population has declined from 96% in 1960 to 86% in 1976, the numbers of such women have greatly increased (from 8.6 to 11 million in 1976).

A continued emphasis on formal education as the major pathway to female employment largely benefits those who can educate their daughters to the high levels required by modern sector jobs. Particularly if the supply of women workers continues to exceed the demand, better educated women may begin to compete with less educated women for jobs they would have spurned earlier.

Of course, our argument should not be misunderstood. We are strongly in favor of the expansion of educational opportunities to females from all walks of life, according to the Egyptian Government's recognized policy of providing equal opportunities for education to all citizens, regardless of sex. But for those sectors of the population who cannot afford the direct and indirect costs of education for girls or boys -- even if schooling is free -- alternative entry into regular employment must be developed. Uneducated women who need jobs now cannot go back to school and cannot wait for their children to grow up and complete high school.

(7) Vocational training programs for women in industry should, therefore, receive the highest priority as alternative pathways into regular, productive employment. Given the needs of industry for female workers and the needs of less educated women for regular jobs, the major prerequisites for such programs are already in place. As discussed in our chapter on vocational training (Chapter 6), practical hands-on training on the shop floor is probably a more expeditious and cheaper way of achieving this goal, although the expansion of female enrollments in technical high schools is also very important.

(8) Increased female labor force participation also presents both private and public sector employers with a different mix of social costs than is required for a largely male workforce. Especially if employers pursue the socially and economically desirable policy of retaining and promoting experienced women workers (instead of maintaining high turnover), existing social costs associated with present labor legislation and customary practice may increasingly be perceived as deterrents to female employment. We argue in Chapter 7 (on child care facilities) that Government and employers may need to reconsider the basis on which these social costs should be carried by both parties (see also L. Jones report on Public Enterprises and Chaudhry 1981 on the cost implications of current labor legislation).

(9). The establishment of high quality child-care facilities has wider social implications that go far beyond the convenience of employers and workers. As the experience of many other nations has shown, good child care facilities represent an excellent opportunity for positive social intervention. Potentially, the health and nutritional status of children could be improved, especially in the case of poor families. Declining morbidity and mortality rates of children may be a factor in motivating families to lower their fertility.

Good child-care facilities also improve children's chances to do well in school. Given the rise in drop-out rates from primary school, pre-school programs represent a potential means of preventing school drop-outs due to poor school performance or inability to adjust to the school environment.

The effects of increased employment of adult females on children and family life have a central place in our approach. In many nations, there has been a tendency among researchers and policy-makers to emphasize only the deleterious effects on children's welfare when mothers are away from home. From a broader societal perspective, this is a one-sided view. In very poor families, adult women must contribute to family income in any case, if the possibilities exist for them to do so. Children must also work and earn. For these families, the regular employment of adult women, in addition to men, could be the most effective way of keeping children in school longer. School drop-out rates are rising again in Egypt (Section 5.6, Chapter 5), a development that might be arrested if adult women had better access to regular jobs in those sectors of the population where children are entering the labor market because families need their earnings. When women cannot earn, moreover, men have little choice but to take second and third jobs to support their families.

Increasing the number of regular earners per family is the most effective and fastest way to raise the incomes of the poor and improve income distribution. To avoid the perpetuation of poverty, it is in the interests of society that these earners should be adults, so as to keep children in school as long as possible.

However, the expansion of industrial employment opportunities for women can be recommended only under conditions where compensation and support services are adequate and standards of health and social dignity can be maintained. It is precisely because women's roles in family life are so central and so highly respected in Egyptian society that it is crucial to ensure that expanding employment opportunities for women in industry are socially and economically acceptable to women themselves and their families. However, where changes are already beginning to occur and where circumstances are ripe for change to spread -- as in the case of women's employment -- it is especially important to examine available policy options in the light of several distinct interpretations of existing data.

The question of women's wages was outside the initial scope of this part of the study but discussions of male and female wages can be found in other Boston University reports (G.Papanek Overview, B.Vermeulen and G.Papanek 1982). This question deserves separate study, since it is one of the central issues that workers, employers and policy-makers will need to consider in developing an equitable and productive employment policy for Egypt.

In the case of women workers in industry, the alternative earning opportunities available to them are crucial to any discussion of wages. Less educated women are finding such opportunities in the informal sector but since little is known about this hidden part of the economy, it is difficult to assess what women are being paid in informal sector work

and as self-employed workers. However, casual observation and micro-studies strongly suggest that women's earnings in most of these activities, not all, are less than they could earn from a regular job in industry. Above all, their work is less regular and unprotected by existing labor legislation, so that one may assume that they are working under less good conditions than in plants where this legislation can be enforced.

From the viewpoint of many workers, therefore, decisions about taking a job are not based on existing male-female wage differentials but on the differentials between available alternatives. The dilemma confronting employers and policy-makers concerned with widening women's employment options is a very difficult one: should job access for women be expanded only if absolute wage equality can be guaranteed for men and women or should the alternatives available to women also be considered? In effect, workers have provided an answer through the evidence that labor supply is larger than demand in industry. In short, despite the fact that average male-female wage differentials have been found to be almost 30%, women workers are seeking employment in positions where these differentials are low or do not exist, as in the public sector. Wage differentials between "men's jobs" and "women's jobs," which are a widespread phenomenon in many countries where occupational segregation by gender is pronounced, account for the large average differentials.

Planners concerned with issues of income distribution and industrial productivity in Egypt will need to be considering these questions in order to avoid some of the negative effects observed in other nations where the increased employment of women workers took place under conditions that were seen to be socially and politically unacceptable because purely economic considerations had prevailed in setting wages and working conditions.

Throughout the report, we have also stressed differences among the various sectors of Egypt's highly stratified and status-conscious society. Since women play such important roles in maintaining the social order, matters of status are crucial in women's educational and employment choices. Many occupations traditionally open to women do not confer prestige on workers and their families. That may be why many adult women who do not wish to enter the labor force themselves (because the jobs they could get are not considered suitable) are eager for their better educated daughters to do so, because "education-dependent" employment confers prestige on the family.

1.2 Methodology and Data Problems

This report is based on a study undertaken as part of the Boston University Industrial Sector Strategy Assessment carried out at the request of the USAID Mission in Cairo. Other parts of the Assessment deal with issues relevant to female industrial employment. Their findings are not repeated in this report (see especially G.Papanek Overview, L.Jones Public Enterprise Report, and B.Vermeulen and G.Papanek on employment).

Work on the present study began in December 1980 and continued through August 1981 when a first draft was submitted for comments and discussion to USAID-Cairo and the Government of Egypt. Subsequent revisions and additional materials that became available later were included in the final report, completed in May 1982. Both authors participated in fieldwork, data collection, and analysis; most sections of the report are the products of joint authorship.

The report is based on the following primary sources: (1) Interviews with policy executives at the Ministry of Social Affairs, the Ministry of Manpower and Training in the Government of Egypt; (2) field visits and interviews with managers and personnel staff in 9 public sector factories employing women in production work, located in Cairo, Alexandria and the Delta, plus a site visit to the mining operation in Upper Egypt of one enterprise with no female

production workers; (3) field visits and interviews at 10 private sector factories, including some established under Law 43, in Cairo and surrounding areas that employed women in production jobs.

Major statistical sources used were the Population Census of 1960 and 1976, and Labor Force Sample Surveys. The many gaps left by statistical sources were filled in, as well as possible, by the use of published books and articles on Egyptian society and economy. Unpublished reports and studies made available by USAID and international development agencies were particularly important in showing the extent of previous efforts to increase the levels of available information about women's work in Egypt. Insofar as they could be located, such reports also provided important indications of attempts to introduce new research and policy approaches on women's employment, particularly with regard to vocational training.

The problem of data access presents special difficulties in policy-oriented research on women. Although much project-oriented research has been conducted on "women and development" in recent years, the research infrastructure in this new field is still comparatively weak. As a consequence, there is much less exchange of data and analyses between policy-oriented researchers in different countries and agencies, or with academic researchers, than is customary in other areas of development research. Special attention should, therefore, be paid to improving this infrastructure.

The underenumeration of women's economic activities has come to be widely recognized as a serious problem for researchers and policy-makers concerned with the integration of women in development. For social and cultural reasons, male heads of household in many nations often "forget" or understate women's economic activities, especially as "unpaid family workers" in a market-oriented enterprise or if they are self-employed in the informal sector. By

contrast, job-holders whose income contributions are more easily measured tend to be enumerated more accurately, especially if their jobs bring prestige to the family. Unless specifically instructed, enumerators also tend to categorize women as "housewives" (hence outside the labor force) in the absence of overwhelming evidence to the contrary. This, of course, presents real problems to employment planners since it may distort the overall size of the labor force, affect unemployment percentages, and understate women's true economic roles.

Time-allocation studies, not yet available for Egypt but conducted in several other nations, also reveal the extent to which standard household interviews understate true economic contributions of both males and females. Once such data become available in Egypt, a reconsideration of labor force statistics will become necessary, both from the point of view of data-collection methods and the concepts used in their analysis. Existing data sets in Egypt understate particularly the economic activities of women in agriculture (e.g. Richards 1981, Firebaugh 1981).

Variations in labor force definitions and instructions for coding may also occur from one Census or Sample Survey to another, seriously affecting comparisons over time. The scope of this study did not include an opportunity for critical review, so that it has not been possible to assess whether changes over time have been due to real rather than methodological changes. This problem has also not been examined in depth in previous analyses of female labor force participation in Egypt (Issa/CAPMAS 1979, Clatanoff et al. 1979, Youssef 1980, Chaudhry 1981). We have attempted to use micro-studies and cross-checks with other sources to confirm our conclusions whenever possible.

Conventional concepts and theoretical frameworks used in the economic and sociological analysis of work, labor force participation, and productivity are often poorly suited to the study of less highly organized economic activities. Existing data collection procedures also favor those areas of economic activity

in which accurate information is intrinsically important to production and profit. This accounts for some of the well-known difficulties encountered by researchers interested in other types of economic activities, or in workers (including both women and men) who are seasonal or part-time.

Given the highly differentiated nature of Egyptian society and the sharp distinctions among status levels, it is unlikely that norms and stereotypes applicable to a particular group can easily be extended to all women. This is particularly important in judging the extent to which women of a specific group may be involved in economic activities, with or without their husbands (el-Messiri 1978, Early 1978, Nadim 1977). Many female economic activities are also carried out away from public scrutiny, inside the homes of women or their employers, or in the streets of homogeneous neighborhoods where there are few outsiders. In short, broad judgments of social attitudes or of women's propensity to accept industrial employment in the society as a whole may be less useful in the development of appropriate policy choices than findings that take account of the great diversity of acceptable economic activities for women among the many groups and strata of which Egyptian society is composed.

Additional research on women's economic activities in Egypt is needed, for the following reasons: (i) although the measured female labor force is small, the economic activities of women are increasingly in the public eye; (ii) existing statistical and conceptual tools have proved unsatisfactory for the study of women's economic activities, making innovations necessary; (iii) accurate presentation of alternatives to policy-makers is particularly important at this point, when the choices to be made may influence employment for a long time to come.

CHAPTER 2: THE SUPPLY OF WOMEN WORKERS TO EGYPTIAN INDUSTRY

2.1 Locating Female Labor Pools

The large-scale emigration of skilled male workers has led some industrial managers to express concern about declining and unreliable supplies of male labor. Some have begun to hire women in positions previously held by men and to consider the possibility of increasing their female workforce.

Is this the beginning of a new trend for Egyptian industry? If so, can enough women workers be found in a society that has come to associate the recent growth in female employment with jobs in "education-dependent" clerical and administrative occupations? Moreover, although Egyptian women have worked in industry during many periods since the early nineteenth century, the country lacks the historical experience of massive female employment in basic industries, such as textiles, typical of early industrialization in so many other nations. Some foreign analysts of Egyptian female employment prospects also consider barriers to women's employment to be inherent in Islamic culture (e.g. Rucker 1981).

The crucial fact to remember in this assessment, however, is that decisions about employment of either men or women are made in the context of highly differentiated standards of suitability. Egyptian society is highly stratified and differentiated into many classes and groups, each with its own subculture and norms. Locating female labor pools for industry is, therefore, not a matter of making such work acceptable to women in general but to find those specific population sectors in which industrial work for women is well regarded or could be made so. Many nations with Muslim majority populations have levels of female labor force participation 2-5 times as high as Egypt's; others have levels that are even lower (Table 4.1 in Chapter 4). This diversity suggests multiple determinants for employment

The low figures of female participation in many occupations in the Egyptian labor force may be of dubious usefulness. Many researchers have already commented on the underenumeration of women in agriculture in official statistical sources (Youssef 1980, ILO 1981, Chaudhry 1981). Others have found such wide fluctuations between adjacent years of the Labor Force Sample Survey for female agricultural workers as to make these figures completely unusable (G.Papanek Overview, 1982).

We believe there is good reason to assume that women in urban occupations, including manufacturing industry, have also been seriously underenumerated. While an actual employment census was beyond the scope of this study, two comparisons support our assumptions.

(1) In Table 2.1, three data sources are compared with reference to female workers in selected industrial occupations. In spite of some differences in categories, the discrepancies between surveys are large enough to suggest errors in data collection.

(2) Comparing the data in Table 2.1 with figures from actual factory records for two public sector enterprises (Table 3.1 in Chapter 3) makes these disparities even more obvious. Employment figures from the electronics factory show that in 1975 the number of women employed in this single factory (1,395) is twice as large as the number enumerated in the 1976 Population Census for the entire category of "electrical assembly and electronics" for all of Egypt (686). Even the figures obtained in the 1977 survey of Employment, Wages and Hours for the entire category "electrical tools, machines" for all Egypt (1,881) are only 25% higher than the female workforce of this single plant in both 1975 and 1980.

These discrepancies may well be part of a more general tendency to neglect precision with respect to females but to be somewhat more careful

TABLE 2.1

COMPARISON OF DATA SOURCES: WOMEN WORKERS IN EGYPTIAN INDUSTRYData Sources

<u>Occupational Category or Industry Sector</u>	<u>Pop. Census^a 1976</u>		<u>Employment, Wages, Hours Survey, 1977^b</u>		<u>GOFI Estimates^c</u>
	<u>Number of females</u>	<u>% of occupation</u>	<u>N fem.</u>	<u>% occup.</u>	<u>% of industry- female</u>
Metals Preparation	208	6.2	800	3.2	(not asked)
Chemicals	1,662	6.4	4,764 (other chemicals)	3.6	60% (pharmaceuticals)
Spinning & Weaving	14,364	6.2	25,501	10.4	(n.a.)
Sewing, Tailoring & Upholstery	25,152	8.2	3,367 (ready-made garments)	51.8	(n.a.)
Electrical Assembly, Electronics	686	0.8	1,881 (electrical tools, machines)	12.7	21% (electronics)
Paper, Carton Manufacture	348	6.9	514	7.2	(n.a.)
Food Products	3,550	2.9	5,397 (food processing)	6.0	28%
Plastics	414 (rubber & plastic)	4.8	623	12.0	18%

a: Population Census 1976, CAPMAS (Table 22)

b: Statistics of Employment, Wages, and Hours of Work, 1977, CAPMAS
(more than 10 workers per enterprise, adults and minors)

c: Personal interview, asking for informal estimates of female participation
in industries considered to be among the biggest employers of women.

both in enumerating males and in classifying them accurately. For example, Table 2.2 shows that nearly half (46%) of female job placements by the Cairo Employment Registry for applicants lacking educational certification were categorized as "unclassified production workers." In precisely the same range of occupations, only 6% of male applicants were thus categorized.

In short, even though doubts are also expressed about the accuracy of labor force statistics concerning males, it is very likely that under-enumeration and misclassification of females is of a much higher order of magnitude.

Intensive field studies show a very different picture of female industrial employment in Egypt. Our observations and interviews, and several recent field studies (Hammam 1979, 1980, Arney-Edeid 1980, Ibrahim 1980) present persuasive evidence of an important female presence in selected sectors of Egyptian industry. These studies also show very clearly that there exists an available supply of women workers for future industrial expansion, provided employers and policy-makers are able to reverse some of the trends that developed in the past two decades or, at least, to develop additional new pathways into industrial employment for less educated women with an interest in industrial employment.

In the rest of this Chapter, we present evidence from direct and indirect sources about the size and location of female labor pools on the basis of historical developments and class differences.

Our analysis of the role of formal education in female occupational choices is closely related to the discussion of female labor supply (see Chapter 5). Chapter 6 on Vocational Training for Women and the case study of a successful employment experiment (Section 6.6) discuss concretely how existing labor supplies can be mobilized for industry without resorting to the pathway of the formal educational system.

TABLE 2.2

Employment Registry Placements^a

(Cairo Governorate, Ministry of Manpower and Training)

12 month period: 1980

Selected Job Categories in Industry

Judged in terms of current shortages (CS), female underrepresentation (FU),
and female skill suitability (FS)^b.

<u>ICOC #</u>	<u>Occupation^c</u>	<u>Placements</u>		<u>Employment Growth Potential</u>
		<u>Males</u>	<u>Females</u>	
11	Chemist	31	5	FU
28	Industrial Engineer	4	0	CS
212	Production Managers	66	1	
700	Production Foremen and Supervisors	746	24	
749	Chemical production Workers	49	21	FU
751	Fiber Preparers	110	18	CS
752	Spinning and Winding Operators	287	40	FS
753	Weaving Setters and Patterners	26	2	FS
754	Weavers and Related Workers	1,878	251	FS, FU
755	Knitters	233	166	
776	Bread/Confectionery Production	3,346	207	
791	Tailors, Dressmakers	199	695	
795	Sewers, Embroiderers	128	354	
796	Upholsterers	87	7	FS, FU
802	Shoe Production	327	14	FS, FU

...continued....

<u>ICOC #</u>	<u>Occupation</u>	<u>Placements</u>		<u>Employment</u>
		<u>Males</u>	<u>Females</u>	<u>Growth Potential</u>
812	Carpentry machinists	308	0	FU
819	Cabinet Makers and related workers	306	0	FU
851	Electrical installation	431	10	S, FU, FS
852	Electronic Fitters	50	0	S, FU, FS
855	Electrical wiremen	117	0	CS
901	Rubber and Plastic Production Workers	633	137	
910	Paper Production Workers	320	79	
921	Type Setting	2,383	17	CS, FS
924	Engraving, Printing	101	0	FU, FS
926	Book Binding and related workers	1,655	14	CS, FS
949	Unclassified Production Workers	932 ^d	1,489 ^e	

a: Cumulative placements by the Ministry, not a complete industrial census

b: Female underrepresentation judged in terms of international comparisons; other judgments by authors.

c: Some job titles have been changed to conform with ILO categories

d: 6% of total placements listed (14,456)

e: 46% of total placements listed (3,231)

Striking evidence for an ample supply of female workers in at least some sectors of industry is presented in Table 2.3, indicating high applicant-to-job ratios -- ranging as high as 13:1 -- in selected public sector enterprises visited in connection with this study. Although some of these are in fields considered to be female specialties (electronics assembly, food processing, textiles), others are highly non-traditional (furniture). We did not find it surprising that there were no women workers in the mining operation visited in Upper Egypt, as female participation in mining and quarrying is highly unusual in most nations. But only more extensive field surveys can show whether our findings are unusual. On the basis of present experience, we would argue that they are probably more typical than is generally assumed.

Public sector firms are required to advertise job openings but firms in the private sector have no such requirements. Managers interviewed told us that there is a steady stream of female applicants and they rarely have a problem in filling available positions. Usually there is a long backlog.

The Ministry of Manpower and Training reports an excess of applicants for all of their female industrial training programs. This again supports the claim for an ample supply of female labor, especially in urban areas.

Cairo Employment Registry records provided the data for the compilation in Table 2.2, which provides additional evidence for women's willingness to enter non-traditional occupations, including industrial production work. The selected job categories presented in this table were drawn from records of applicants without higher educational qualifications, i.e., those most likely to enter industrial production work. The very wide diversity of job categories in which these applicants are currently being placed should

TABLE 2.3

Hiring Requirements and Applicant-to-Job Ratios
for unskilled factory production work
in selected enterprises, 1979-1981
(Public sector, large-scale)

<u>Location and type of enterprise</u>	<u>Hiring Requirements</u>	<u>Applicant-to-Job Ratio</u>
(1) Helwan Textile plant	read and write minimum age: 18	8:1
(2) South Cairo Electric and Water Meter plant	unmarried (informal req.) <u>Adadeva</u> (Preparatory degree, below high school)	13:1
(3) Qualubia province (Delta) ^a Food processing company	read and write good health	2:1
(4) Alexandria Canning company ^b	read and write good health	1.5:1
(5) Central Cairo Wood finishing and furniture plant ^c	read and write minimum age: 15	5:1
(6) Alexandria Electronics assembly ^d plant	<u>Adadeva</u> (preparatory degree) unmarried	6:1

Source: personal interviews with personnel managers and administrators in each factory, by B. Ibrahim and H. Papanek.

NOTE: Each factory reported moderate to severe difficulties in recruiting and keeping unskilled male workers.

a: Company hires 600 seasonal workers, many of whom are on waiting lists to receive full-time jobs.

b: Ratio refers to full-time workers. This factory had the only reported shortage of female workers for seasonal contract work.

c: This factory was previously all-male. Newspaper advertising brought enough applicants to fill 50 newly created positions in less than a week.

d: Personnel officer reports that "psychological tests" are administered to weed out excess applicants. Actually, these are tests of simple manual dexterity.

dispel many preconceptions about the types of work Cairene women are willing to do.

Male-female ratios of workers applying for placement in industrial jobs are also much lower than expected, on the order of 5:1. This contrasts sharply with the low proportion of female workers enumerated in industrial jobs in available statistical sources. This may mean an upward trend in the numbers of women interested in these occupations, supporting our claim for a growing supply of female labor to industry. It is also possible that women face more serious obstacles than men in getting jobs in industry on their own and must therefore depend more heavily on the services of the Employment Registry. This supports our judgment of relatively low demand.

As possible guidelines to further research, we indicate (in the last column of Table 2.2) our judgments of current skill shortages (CS), female underrepresentation (FU) compared with other nations, and female skill suitability (FS) for these occupations. Although it has been impossible to explore these suggestions more fully in the present report, further studies may be able to develop an accurate assessment of (i) available skills among women workers and applicants, (ii) employer needs, (iii) training facilities available to women, and (iv) the vocational training needed to bring available women workers into jobs where shortages are experienced. This last point is the most important. We discuss Vocational Training in Chapter 6.

Table 2.4, also based on Cairo Employment Registry Records, shows a somewhat different picture for applicants with educational credentials. These figures show that the strongest pressure for employment via the Registry comes from holders of Intermediate certificates without previous employment (57% of total applicants, counting males and females). As also shown by the 1976 Population Census, high-school educated females were the fastest growing sector of the measured female labor force since 1960 (Tables 5.1, 5.2).

TABLE 2.4

Cairo Governorate Labor Registry Registration Accounts
 (31 December 1980)
Male and Female Applicants Holding Educational Credentials

<u>Educational Status</u>	<u>Already employed, seeking transfer</u>	<u>Unemployed, previously employed</u>	<u>Unemployed, no previous employment</u>	<u>TOTALS</u>
Less than Intermediate	765	82	3,366	4,213 (10%)
Intermediate	2,086	418	23,289 (57%)	25,793 (63%)
Other intermed.	431	112	1,967	2,510 (6%)
University, incl. BA, MA, Ph.D.	<u>1,622</u>	<u>207</u>	<u>6,658</u>	<u>8,487 (21%)</u>
Totals	4,904 (12%)	819 (2%)	35,280 (86%)	41,003(100%)

As more girls obtain Intermediate certificates, they will probably be unable to find jobs in the preferred white collar "education-dependent" occupations into which so many have been absorbed. Some may then begin to seek jobs in industry, particularly if the introduction of sophisticated technology improves their perceptions of these jobs and as employers choose the most educated from a large supply of applicants. In East and Southeast Asia, massive numbers of young female high school graduates have been hired by large enterprises (usually multinational) in light industry, particularly electronics. In these nations, the employment of high school graduates in industry is a relatively new pattern. Lack of sensitivity to the needs of workers and their social and cultural traditions have led to widespread criticism of some enterprises.

In Egypt, the growing numbers of female students in technical vocational schools support this possibility. Although the numbers are small (Section 6.3, Chapter 6), higher proportions of girls than boys finish the course. Technical vocational graduates are also eligible for government guaranteed employment, to which academic high school graduates are not entitled.

The potential spill-over of these better educated young women into industrial production work, while desirable from some points of view, could also increase the competitive pressure experienced by uneducated and less educated women, for whom factory work has been a virtual prerogative in the past. Female production workers are already better educated than men in the same occupation (Table 6.1, Chapter 6) but, as of 1976, there were virtually none with Intermediate education although some were found in factory studies (Ibrahim 1980). Employers and policy-makers, therefore, need to consider the potential difficulties this could pose for women from the poorer and less educated groups. This possibility also makes it even more urgent to provide good vocational training facilities for the less educated to improve their competitive position in getting industrial jobs.

2.2 Male migration and female employment

The creation of a female labor supply as a result of male migration depends on the class and age composition of the male migrant population and on their levels of skill, training and education. The consequences of male labor migration on Egyptian families are currently being studied in detail (Awmy, Khattab and Hopkins, forthcoming) but some observations are relevant to the development of industrial labor pools.

In general, Egyptian women tend to enter paid employment between the end of their schooling and the birth of the first child. Later entries are comparatively rare, although they may result from the death of a spouse and from divorce. If male migration is to have a significant impact on the existing pattern of labor force entry by females, this is most likely in cases where men migrate early in their lifetime working career. Less skilled males, for example, tend to migrate around the time when they would ordinarily marry and start a family. This means that they either delay marriage or at least child-bearing when they decide to migrate. Couples may face delays of several years in setting up a household and before the first child is born. In this case, newly married and not yet married women stay longer in their parental households. This makes it more likely that they will seek paid work.

These young women are generally not highly educated, if they come from class backgrounds in which young men are also unskilled workers or have only low-level skills. Although extensive data are lacking, we have found some evidence of this pattern in our interviews and field observations, especially in young women working for small private industrial concerns. Following this line of reasoning, male migration among less-skilled and less educated groups can be assumed to increase the available supply of poorly educated young women for industrial employment, especially in the urban working class and among rural teenagers.

2.3 Working-class employment strategies: Inflation and Open-Door Economics

A generation ago, wives in urban working-class households were very unlikely to be part of the active labor force. Formal participation rates fell for women with less than secondary educations over the period 1937-1970. These women were less likely than women in the nineteenth century to be involved in services or in craft production that had once been organized into traditional guilds. Only a fraction of these women had access to education or to employment linked to educational credentials. Out of 50 public sector female factory workers interviewed in 1977-78, not a single woman's mother had held a regular job , although many had raised chickens and had other sources of occasional income (Ibrahim 1980).

At the same time, other family members showed higher propensities to work, in these earlier generations. In 1947, males aged 6-15 had a 26% labor force participation rate; among those aged 15-20, 79% were in the labor force. These rates have fallen rapidly over the last thirty years, with the extension of free primary education and a legal minimum age for employment set at 12 years in 1959. By 1973, participation rates for males under 15 had dropped to 9.6% and only 49% of those aged 15-20 were recorded in the labor force.

This large-scale withdrawal of children and teenagers from the labor force could only occur if the real wages of male household heads were rising. There is some evidence that this did, in fact, happen during the 1950's and until at least 1965. Average annual income per capita at constant prices increased from LE 37.0 to LE 52.2 during this period. After 1965, the picture is less clear but suggests stagnant incomes for most groups until 1973.

Against this background, it is easier to understand the vigorous growth in female labor force participation (at ages 15 and over) in the last 5-6 years and the mushrooming figures for female unemployment. At an earlier time, younger members of the household could be kept out of wage labor as long as real wages rose for male heads of household and did not create pressures for increased employment of adult females. For those families whose economic situation required allocating an additional member to the labor force, a gradual shift away from child labor had occurred. The long-term benefits to children of remaining in school longer had begun to be understood. Instead, older daughters and wives were increasingly allocated to the labor force.

At first, the expanding urban industrial sector provided jobs for this nascent labor pool. The modest demand for female industrial workers was balanced by remaining cultural constraints against factory employment in the 1950's and 60's. Changes in the Egyptian economy profoundly altered this picture in the mid-1970's.

Households found their income position declining if only one adult member was employed. The Open Door Policy created demands for imported goods and higher consumption goals in all urban classes. Labor migration brought cash incomes to families receiving remittances but also fueled inflation and produced a sense of relative deprivation in families without migrant members.

All of these factors created pressures for additional sources of household income. Several strategies can be identified by which families coped with the new realities. One well known but poorly documented choice has been for adult males to take on second and third jobs. Reportedly, this has had a negative impact on productivity in government and the public sector, as might be expected.

Preliminary evidence also suggests that the participation rates of young males aged 6-15 may once again be rising, after the steady decline noted earlier. Some families reason that apprenticeships for young sons are more advantageous than continued schooling because of the high expected earning potential in certain trades where there are now skill shortages. Opportunities for young males may also be expanding as replacements for male workers who have emigrated or as assistants to men who have remained in short-handed enterprises.

A third strategy adopted by families in response to economic conditions in the late 1970's and early 80's has been to increase the participation of daughters and wives in the regular labor force. Educated women who once would have quit their jobs at marriage now show a tendency to continue. Women with few academic credentials, who once would have worked only sporadically for pay and only in a crisis situation, now actively seek stable employment. Unmarried working-class girls once feared the social stigma of employment; now there is a general recognition that employment enhances a girl's marriage prospects.

These changes explain some of the reasons for increasing supplies of female labor, especially in public sector industries and among women with low skill levels and little formal schooling.

Class differences also play an obvious role in how education affects labor force participation. Among poor and working-class families, female labor force participation is more closely dependent on the income needs of households and family mobility strategies than on personal ambitions for a career that have developed during long years of schooling. Even if many working-class women can anticipate lifetime working commitments, especially if they are lucky enough to get a regular job in the public sector, family needs usually play a major role in their choices.

These differences among women of different class backgrounds, with respect to the importance of formal education in their decisions to seek employment, should be kept in mind. While the end result of schooling -- the certificate -- is certainly crucial, the process of education may be less relevant for women whose decisions to seek jobs depend less on individual talent than on collective need,

2.4 Female Unemployment : Implications for Industry

Female unemployment is high and rising. The 1976 Population Census lists the total female labor force (ages 12 and up) at 776,000, of whom 141,900 (18%) were reported as unemployed.

This high proportion of reported female unemployment is unprecedented and may be due to two major causes:

(i) female graduates eligible for government guaranteed employment are automatically registered as seeking employment when they graduate (as are males) and must continue to be recorded as unemployed to remain eligible;

(ii) more of the uneducated women may be looking for jobs, confirming our analysis of their declining labor force participation, which adds to social tensions and income distribution problems.

During the 1970's female unemployment grew faster than employment, which supports our argument for an ample supply of female labor. Trends comparing male and female employment and unemployment during the 1970's are shown in this compilation (using the same procedure of excluding female unspecified and agriculture categories as unreliable as in G.Papanek Overview):

Average compound rates of growth in male and female employment and unemployment (LFSS)

	1971 - 1975	1975 - 1979
FEMALES		
Employment	2.1%	7.6%
Unemployment	24.0%	14.0%
MALES		
Employment	2.4%	1.3%
Unemployment	6.0%	20.6%

Census figures from 1960 and 1976 also show that the female share of the unemployed has also increased substantially. While females were 20.5% of the unemployed in 1960, this proportion had increased to 34.4% in 1976.

The ILO Employment Report (1981) considers high female unemployment to be "a permanent phenomenon, probably increasing with increasing education." (p.62) Although the assumptions of the authors are not clearly set out in the ILO Report with respect to this conclusion, it may be that they are referring to the displacement of uneducated women by those who are better educated (see Chapter 5).

Another interpretation of rising female unemployment can be related to the government's policy of guaranteed employment for graduates of universities, and technical, commercial and agricultural institutes.

Graduates of these educational institutions are automatically registered as seeking employment and have been led to consider it as a right. As the number of girls completing each level of education increases at lower levels, the pool of potential workers actively seeking employment also grows, since the last two decades have seen a substantial expansion of female participation in occupations requiring educational certification.

Government guarantees of employment usually take two or three years to implement. While they wait, graduates may take jobs needing lower qualifications or seek private sector employment. Many female graduates "wait at home" but presumably report themselves to enumerators as looking for a job, something they might not have done in earlier times when the expectation of a job was absent or elusive.

Girls who complete only the primary or preparatory certificate face even longer periods of job hunting. Observations of the recruitment process at factories near Cairo in 1978 showed that some unskilled applicants had been answering newspaper ads and seeking work since their graduation from preparatory school (adadeya certificate) four years earlier (Ibrahim 1980). As Census figures also show a declining labor force participation rate among less educated females, some of this decline may be attributed to long delays in getting jobs and the ready propensity of enumerators to report women as "housewives" in the absence of convincing contrary evidence.

The Human Resources Survey of the Suez Canal Region in 1980 (Spectrum 1981) concentrates on lower socio-economic groups and their employment chances. This study shows that of all women reporting an occupation, 24% were new entrants to the labor force seeking employment. They represented 37% of the total labor force classified as unemployed new entrants.

These data show that forces within Egyptian society are encouraging

women to stay within the labor force in spite of a scarcity of jobs. There appears to be a changing climate within the labor market, as women increasingly perceive a possibility of finding a job eventually and hence classify themselves as unemployed rather than outside the labor force.

A need for women's income contributions under present economic conditions, and a perception among middle class families that suitable jobs are now increasingly available also contribute to this changed climate.

Further research is needed into the characteristics of that group of women classified as "unemployed" and those returned by Census enumerators as having an "unspecified" economic activity. The enormous increase in the "unspecified" category in some surveys may indicate more serious problems in the economy than can be explained by changes in methodology or definitions. If more were known about the age structure, geographic location, and qualifications of these two groups, it would be possible to relate these factors to the perceived shortages and surpluses in male labor supply and male unemployment.

Changes in the sectoral distribution of women workers also play a role in female unemployment. Given the growing preference for white-collar jobs and the high enrollments of females in commercial institutes, chances are that many young women look first for jobs in the white collar non-industrial field. If they fail to find jobs in the categories that are often considered more "suitable" for females, especially with education, they may seek other jobs as a second choice. An employment policy seeking to channel more women into industrial jobs would need to pay attention to this "overflow" of young women with some vocational training who cannot find jobs in offices or who, having found them, judge them to be boring, poorly paid, and unproductive. Some of these young women work in the furniture factory described in detail in Chapter 6 (Section 6.6). Their

comments on their new jobs in a non-traditional field, in fact, suggested the "overflow" strategy, as they were so insistent on wanting to do interesting and productive work (at an attractive wage) and willing to enter a very unusual field of work.

An entirely different group of women, who also represent an important pool of labor for industry, are not necessarily among the officially unemployed. Many women who would be acceptable and capable industrial workers are probably already working in informal sector activities, or as part-time or "day laborer" workers whenever they have the chance. Earlier generations of industrial production workers did not come to their work through the educational system. Present-day workers in some private sector enterprises with low wages and exploitative working conditions (Hammam 1979) would almost certainly opt for jobs at plants where wages and working conditions are better.

But it seems more and more doubtful that such women would be accepted as workers -- unless employment opportunities are greatly expanded and educational certification requirements adjusted to a realistic evaluation of the job.

2.5 The female employment tradition of the industrial working class

The rapid social mobility that occurred in Egypt after 1952 markedly transformed its class structure (S.Ibrahim 1980). Along with the development of public sector industries, widespread social changes and class differentiation also contributed to the formation of a rather cohesive working class subculture oriented to industrial production. Industrial workers with good access to regular employment were (and are) in a much better economic and social position than the irregularly employed unskilled workers. In Egypt, the prerogatives of the industrial working class have included women's access to industrial production jobs.

Married and unmarried women in this group have worked in industrial production for years, especially after the expansion of the public sector in the 1960's. Many of these women live in Industrial Workers Residences, the housing provided for workers near public sector factories. Since this group of women workers is of particular importance to our assessment of female industrial employment, but has not yet been studied in much detail, we have drawn on data collected in the large national Population and Industrialization Survey (Loza 1980) and a smaller study of women workers in several public sector factories (Ibrahim 1980) to indicate some of the characteristics of this group.

With regard to the supply of female labor to industry, the most important findings of the national Population and Industrialization Survey (Loza 1980) concern the high probability of finding female production workers in the families of men also working in industry. (In this Survey, data were collected from 5,000 households in all parts of Egypt; half of all households were headed by men working in various industrial occupations, including production work; 10% of all households resided in Industrial Workers Residences.)

A total of 12% of all the wives in the 5,000 households had past or present employment experience, about twice the size of the measured female labor force in 1976, at one point in time. Many of these wives were or had been production workers; over 50% of currently employed and 38% of previously employed wives described their work in these terms. Daughters were particularly likely to contribute to household income in families living in Industrial Workers Residences. We judge that, in addition to economic need, they were motivated by the proximity of possible employment and favorable attitudes toward paid employment (especially in factory work) in their families and neighborhoods.

In our interviews, managers often commented that male workers brought in daughters or nieces as job applicants "because they know it is a safe place to work." This was a matter of pride to the managers but it is also very likely that workers expected their female relatives to get preference in employment. Widows of workers also customarily get employment preference in their late husbands' firms. The relatively low wages offered in public sector firms to production workers (in comparison to parts of the private sector) are offset for women workers by steady promotions, early retirement, social benefits and, usually, acceptable working conditions. These are not generally the conditions of employment in many private sector firms, although there are wide variations, but the differences make public sector employment preferable.

The importance of kinship relations in the industrial employment of women is also supported by the Population and Industrialization Survey. Just over half the women with production work experience were married to production workers. Among men employed in industrial enterprises, although not necessarily as production workers, 40% were married to women who are (or were) production workers. By contrast, men not employed in industry only rarely married production workers (1.5% of cases).

Daughters of production workers are also very likely to marry production workers. Over half the women in the Population and Industrialization Survey whose fathers were production workers went on to marry men also engaged in this type of work. Outside agriculture, no other group in this Survey shows a comparably high degree of intermarriage among families in the same occupational group.

A smaller study of women workers in several public sector factories (Ibrahim 1980) lends further support to these findings. Among the women workers studied, 62% had male relatives in the same factory; of all married women workers, 54% were wives of fellow workers.

These women also reported that attitudes toward female industrial work had changed sharply in recent decades. The cohort who had started to work in industry between 1955 and 1964 reported in 67% of cases that neighbors and relatives had expressed strong disapproval at the time. Of women who started to work in industry between 1965 and 1970, only 24% had encountered such opposition; of those entering after 1971, only 17% had been criticized (Ibrahim 1980).

Working conditions in public sector firms often make this acceptance easier than it might be in other industrial enterprises. Work is typically organized to prevent placing women in conditions where they might be defined as "vulnerable" in the terms of their society. Strong efforts are made to support cultural values about appropriate behavior between males and females. Transportation, health care, and other services often insulate women from the perceived hazards of "the street." While working conditions, of course, vary widely within the private sector, it does appear that women enjoy a somewhat greater degree of socially appropriate protection in the public sector firms that have been studied (and in those visited for this study) than in industrial enterprises in the private sector on which researchers have also reported (Hammam 1979, 1980).

Studies of women factory workers also stress the great importance of harmonious relations among workers on the shop floor (Ibrahim 1980), a point relevant to hiring policies of employers. Given the very pronounced stratification of Egyptian society, harmonious relations among women workers may be more readily attained when the working group is relatively homogeneous in terms of class background and formal schooling.

In short, the social structure and prevailing attitudes of the working-class families studied in the two surveys show convincing evidence of strong social cohesion. In Egypt, as in many other societies, trades and

crafts are traditionally passed down from parent to child. Occupational specializations are closely linked to kinship and community relations. Nepotism is an established and valued feature of occupational recruitment. Industrial development in Egypt has simply extended these patterns to new groups of workers.

Women from this sector of the population are the ones most likely to provide a supply of labor to industry. Because of the existence of Industrial Workers Residences, these areas are particularly concentrated labor pools for industry. Production work is an accepted employment option for women in this group, as it often is not in other sectors of the population. Many working-class families have not been able to provide extended formal schooling for their daughters. It is also possible that the value of female education has not yet been fully demonstrated in this group, even if there is not necessarily a tendency to withhold access to education by females as part of a particular lifestyle, as may be the case in other social sectors. Yet these families need their daughters' contributions to household income, a need that will continue in their own households as these young women marry and move away.

Employers who recognize this group's favorable predisposition to industrial work, in spite of possibly very low educational attainments, may be able to attract a very valuable body of skilled workers, provided they do not require unrealistically high educational certificates. (These points are discussed in more detail in Chapter 5 on education-employment linkages and Chapter 6 on vocational training.) But if educational requirements are raised to levels that this group cannot afford or which many young women of this class have not yet been motivated to attain, it is possible that this existing pool of female industrial workers will not be fully utilized for the benefit of Egypt's industrial development.

2.6 Getting a Job in Industry:

Recruitment of workers differs in private and public sector firms, as does the length of service of women workers.

In the public sector, women workers typically begin work at age 18. Nearly all are unmarried and by law should have basic literacy. Some companies report a 10-15% attrition of female workers at the time of marriage; in others, the percentage is negligible. Women working in public sector industries increasingly stay on the job until age 45, when they qualify for retirement with full pension, if they have completed 20 years of work.

A liberal system of leaves, paid holidays and social services in the public sector, which makes it easier to combine family and job responsibilities, largely accounts for the stability of the female workforce in the public sector. Married women are not required to work overtime, as they may be in private companies.

As growing numbers of women choose to marry fellow workers, traditional objections to the employment of wives has declined. When both husbands and wives work in the same establishment, their shared aspirations for upward mobility and their consumption goals tend to support the continued employment of wives (Ibrahim 1980).

In the private sector, however, the female employment pattern is similar to that in other Arab countries. Highest participation occurs between the ages of 12 and 20; fewer women continue after marriage, although widows and divorcees may seek jobs at older ages. At the present time, age 12 is the legal minimum age for employment in Egypt. It is not uncommon to see underage boys in small factories but most firms observed in this study concentrated their female employment among girls aged 14-18. Managers calculate that if they hire a girl between 12 and 14, they will get 6-8 years of service before she marries and leaves.

About ten percent of these women return to factory work once the size of their family or the incapacity of a male wage earner makes it necessary for them to earn. They must start again at the bottom of the wage ladder but many report being relieved to find any job at all. They would prefer getting a job in a public sector firm but say that managers are biased against hiring married women. This was borne out by observation of the hiring process at two factories. Managers freely express a strong preference for unmarried women because they say that their absentee rates are the lowest of all. However, managers who were specifically asked whether they had calculated the absentee rates of male workers, unmarried female workers and married females said they had never made these comparisons but based their judgments on the frequency with which married women workers reported problems concerning children and family responsibilities.

Recent evidence suggests a trend among unmarried workers in private sector factories toward remaining on the job after marriage. As many as 10-20% of female workers in private establishments surveyed were recently married. In one small textile plant with 45 women workers (out of a total of 272 workers), the owner said all were unmarried. A tour of the work groups (each consisting of 6-8 women) showed that each group contained at least one woman who was working subsequent to her marriage and sometimes more. The women said that they had kept their jobs because husbands were serving military duty, or abroad seeking work, or that the couple had aspirations that could not be met on one salary.

Unmarried women worked one shift plus overtime, for an average of 12 hours a day. Married women were allowed to leave after 8-10 hours. In factories that do not permit this flexibility, married women usually have to quit their jobs.

2.7 Age and marital status of female production workers

In the case of female workers, both age and marital status are particularly important aspects of the labor supply as these factors affect labor costs, the need for social services, and the levels of education or training that might be expected. In particular, the continuing employment of women workers after marriage calls for different management approaches and social policies than does a situation in which most women workers stay in the labor force a very short time while they are young and unmarried.

In Egypt, the measured female labor force as a whole is rapidly getting older. Peaks in the age distribution have moved steadily upward from the 15-19 year cohort in 1960, to 20-24 year-olds in 1973 and 25-29 year-olds in 1976. As might be expected, given the importance of marriage in Egyptian society, this upward shift in age distribution has also brought with it an increase in the number of married women workers.

Stereotypically, female production workers in industry are young and unmarried, dropping out of employment at the time of marriage and rarely returning thereafter. Census figures do not support this stereotype. As shown in Table 2.5, in 1976 fewer than half the enumerated production workers were "never married"; 15% were widowed or divorced and fully 36% were currently married. In other words, Egyptian industry is already employing many married women as production workers. As the Table shows, in some categories (spinning/weaving; sewing/tailoring), they constitute more than half the occupational group. Administrative personnel, who also tend to be older, are even more likely to be married women. Since -- as some managers told us -- it is easier to spare a secretary than a production worker, administrative personnel may also have an easier time reconciling family work and responsibilities with their jobs.

TABLE 2.5

MARITAL STATUS OF FEMALE PRODUCTION WORKERS, 1976

<u>Economic Activity</u>	<u>Marital Status</u>								<u>TOTAL</u>	
	<u>Never Married</u>		<u>Married</u>		<u>Divorced</u>		<u>Widowed</u>		<u>N</u>	<u>%</u>
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>		
Administ. & Production Supervisors	365	28.8	783	61.8	40	3.1	79	6.2	1,267	100
Spinning & Weaving Workers	7,455	53.8	4,996	36.1	431	3.1	976	7.0	13,858	100
Sewing, Tailoring Workers	12,501	52.1	8,418	35.1	864	3.6	2,196	9.2	23,979	100
Labor in Food & Drink Production	1,750	51.4	1,016	29.8	142	4.2	496	14.6	3,404	100
All other Production Workers Combined ^a	5,376	39.1	5,240	38.1	846	6.1	2,280	16.6	13,742	100
TOTALS	27,447	48.8	20,453	36.4	2,323	4.1	6,027	10.7	56,250	100

Source: Population Census 1976, CAPMAS (Table 26)^a: excluding unspecified workers

In short, while it may be true that the typical applicant for a job in industry is young, unmarried, and poorly educated, growing numbers of women workers are staying on the job after marriage and child-bearing.

This development has clear implications for employers. In public sector enterprises, managers can expect female applicants to stay in their jobs longer, as fewer will choose to leave at the time of marriage if present trends continue. The higher social costs incurred by public sector enterprises for married workers will, of course, have to be considered in the context of the stability and productivity that can be expected from long-time female employees. As we suggest in Chapter 7, the benefits of good child-care facilities do not accrue only to workers and their employers but also to the society as a whole. Social interventions, carried out through child-care centers, could include educational and health services that would improve children's chances of doing well in school and improve their health and nutrition. For this reason, different cost-sharing arrangements between the Government, the enterprise and the worker should be considered in conjunction with efforts to increase the female labor force. As a minimum, social costs, such as support for child-care facilities by the enterprise, should be accounted for in a separate cost category in the evaluation of management performance in public enterprises (see L.Jones Public Enterprise study).

In the private sector, these trends are likely to affect management actions rather differently, since there are no constraints on firing workers. There are many ways of "encouraging" married women workers to leave their jobs, short of being dismissed. Requiring long hours of overtime from all workers will quickly cause women with heavy burdens of family work to quit and seek employment more compatible with their "second shift" (as family work is called in many Eastern European nations).

The high proportions of married women workers also deserve comment because of their possible implications for employment stability. Since most entrants into the industrial labor force tend to be young and unmarried, the high proportion of married women workers documented by the Population Census supports our contention that production work is both needed and desired by working class Egyptian women and their families. In comparison with the very poor, industrial workers and their families are relatively better off, in part because of the earnings of wives and daughters.

Moreover, existing attitudes about hiring older women workers also make it unlikely that these older married women frequently move from job to job or that they often drop out of employment and re-enter, as has been the case in some industrialized nations. Although it is impossible to be sure, our observations suggest that these high participation rates by married women indicate a surprising degree of continuing employment and stability, in view of the difficulties known to face older women entrants into the labor market. To the extent that the stability of this group becomes more widely recognized, it may also contribute to attitudes more favorable toward industrial production jobs, at least in some types of factories. As a matter of fact, male production workers increasingly comment on the desirability of marrying a girl with a factory job because she will be able to continue working and earning after marriage (Ibrahim 1980).

In the public sector, early retirement (at age 45) and generous pensions undoubtedly play an important role in motivating women to stay in their jobs but in the private sector economic need must be presumed to be the major factor. Census statistics do not provide insight into the distribution of female production workers among private and public sector enterprises, so this question must remain unanswered.

2.8 Status factors in industrial employment for women

The supply of women workers to industry is also affected by the way in which industrial employment is perceived in Egyptian society. In addition to sheer economic need, women's motivations to seek paid work outside the home are affected by the impact of their employment on others. A crucial factor to consider is whether a particular occupational choice raises or lowers the status of the individual and her family. Indeed, the fear of status loss can override economic need on occasion, except when there is no status to lose. In many societies -- but particularly in nations with large Muslim populations -- women's behavior is powerfully constrained by cultural and social norms related to family honor and prestige.

When paid employment is contemplated by a woman, the decision-making process usually involves her whole family. Economic need, status gains and losses, the comfort and convenience of other family members, women's own wishes and their preparation for employment are among the factors to be considered. The calculus of anticipated gains and losses differs, of course, among particular families but also among different classes. It is very difficult, therefore, to make any general statement that will apply to Egyptian women as a whole.

Research on attitudes toward women's employment in Egypt has typically focused on the status gains and losses associated with entering a particular occupation. It is generally accepted that different social classes and cultural groupings have different attitudes on these matters. What is probably most useful, however, is to focus on the status associated

with the jobs that are available to a given category of women. Thus, families who reject some employment options for women are probably not against their entry into the labor force as such but only against the particular kinds of jobs open to these women. Many adult women, for instance, who do not wish to enter employment themselves are often eager for their better educated daughters to find paid work.

There appears to be widespread agreement in Egypt on the status hierarchy among available jobs. This hierarchy is closely aligned with the educational prerequisites for jobs. Formal education confers prestige in and of itself, but it also confers prestige on the jobs that require educational preparation. Government guarantees of employment for highly educated persons are consistent with this evaluation and may further have emphasized the importance of education by rewarding those families with sufficient resources to send children to school for many years.

Egyptian women also seem to prefer desk jobs, sometimes calling them particularly suitable for women because they are "relaxing." Perhaps this is a vestige of earlier tendencies, also seen in other nations, that placed great value on the "conspicuous leisure" displayed by women in wealthy families.

Seen in these terms, industrial employment for women is not widely desired. But small cohesive subcultures also make their own norms that can differ considerably from those held by the wider society. This seems to have happened in the case of working-class families, as already noted. The benefits of industrial employment, especially in public sector enterprises, led to a fairly rapid change in attitudes among the relatives and neighbors of women who chose this work. Favorable working conditions, acceptable wages, and social benefits played an important role, as did

the recognition that families with more than one regularly employed adult had higher incomes and better chances for upward social mobility.

It seems, therefore, that the status and prestige evaluations of some occupations for women are also quite flexible and subject to change. Industrial employment in certain sectors (e.g. electronics) might be found acceptable even by women with considerable education, such as the Intermediate (high school) level, if the experience of other nations is a guide. In other words, "industrial employment" might come to be a highly differentiated category of employment for women, in which some jobs carry much higher status connotations than others, rather than a single category with relatively low status in the society as a whole. Wages and working conditions will obviously play an important role in these attitude changes, as shown in the case study presented in Chapter 6 (Section 6.6).

If the range of industrial production jobs open to women were to broaden sufficiently to attract more highly educated workers, managers and policy-makers face an important policy choice. Concerted efforts will be needed to differentiate among specific occupations in terms of the skills and educational preparation actually needed for good work performance. It would be a serious error to raise educational certification requirements for production jobs that do not actually need this level of preparation. This would only limit employment access of women for whom industrial production work has already been a desirable option and who enjoy the approval and social support of relatives and neighbors in their choice of occupation. This group of women, as already noted, tend to be stable and productive workers, which is what managers are looking for. Moreover, the examination of actual job requirements and educational preparation may serve to indicate some of the defects in the educational

2.9 Summary

To answer the question posed at the beginning of this chapter, the evidence assembled from a variety of sources shows that many Egyptian women are seeking jobs in industry but they are not widely dispersed throughout the population and special ways may need to be developed to place them where they can work most productively. Doing so may require a reversal of some of the policies of the past two decades in which formal schooling has become emphasized as the major route to female (but not male) employment. In later chapters, we argue that such a policy may have adverse effects on that very large majority of the population where women are poorly educated, yet many of them need paid work.

Our evidence includes the following major points:

- (i) Women in urban occupations may have been severely underenumerated, in addition to female agricultural workers, already known to be undercounted.
- (ii) Women workers are an important presence in selected sectors of industry but there is wide disagreement about the size and location of this group among available statistical sources.
- (iii) Applicant-to-job ratios, presented in Table 2.3 shows that a much greater supply than demand exists for female production workers in industry.
- (iv) Although female workers are being placed in some non-traditional jobs in industry, they are still severely underutilized in areas of the most severe skill shortages (Table 2.2) and unusually many female workers are categorized as being placed in "unspecified" job categories.
- (v) The effects of male migration on female labor force entry are not well understood, requiring more study, but are likely to increase the supply of poorly educated young women for industrial employment, especially in cities.
- (vi) The high proportion of reported female unemployment (18% in 1976) is unprecedented and the growth of reported female unemployment is much

higher than the growth in employment. This supports observed changes in the expectations of many young women that they will enter the labor force.

(vii) Women in the industrial working class have a considerable tradition of seeking employment as production workers in industry, particularly in public sector firms and especially among families living in Industrial Worker Residences. Industrial employment is well accepted for women in this sector of the population and the earnings of wives and daughters are an important source of family income. Kinship ties are strong among workers and further support predispositions to view industrial employment for women very favorably.

(viii) While the typical applicant for a job in industry may be young, unmarried, and poorly educated, more than half of all production workers in 1976 were married, divorced, or widowed women (Table 2.5), showing the high propensity of women workers to stay in their jobs after marriage. Unlike the prevailing pattern in some other countries, Egyptian women do not generally drop out of the workforce when they marry and then reenter it later but tend to stay in their jobs until early retirement (age 45 in the public sector). This increases the need for social support services such as child-care facilities (Chapter 7).

(ix) Status considerations are important to female employment in Egypt. While many sectors of society look down on industrial employment for women, small cohesive subcultures -- such as the industrial working class -- also make their own norms. For this reason, generalizations about "all Egyptian women" may be misleading. Class and status factors, often associated with educational attainments, are also important in selecting a relatively homogeneous workforce in a particular establishment.

CHAPTER 3: THE DEMAND FOR WOMEN WORKERS IN INDUSTRY

3.1 What Do Managers Want?

Industrial managers, motivated by current upheavals in the labor market, are discussing the following options as they revise their long-standing employment strategies:

- (i) an adjusted wage and incentive structure to prevent labor turnover and retain the present workforce;
- (ii) reducing the total workforce through reorganization of capital investments, particularly in labor-saving machinery; and
- (iii) replacing scarce male workers with boys or adult females.

To summarize the demand picture found in manager interviews, we noted a growing number of industrial managers responding to labor market forces by increasing their reliance on female production workers. Obstacles to increasing female employment evident in these interviews were the presumed costs of female workers as compared to males, shift restrictions contained in labor legislation, lack of industrial skill training for women, and strongly held stereotypical views of women's place in society.

Our observations and discussions with industrial managers convince us that one of the significant obstacles to increased industrial employment for women lies in management attitudes. Often women are perceived as poor employment risks. Shop floor managers may report success and high productivity with their female workers yet higher administrators in the same plant state that "our women prefer to stay at home." We therefore emphasize the importance of the distinction between concrete experience with female workers and the perceptions held by employers, policy-makers and workers themselves.

3.2 Historical background of demand for female industrial labor in Egypt

Women have formed a marginal pool of labor to Egyptian industry since the earliest attempts at modernization under Muhammad Ali. Their numbers increased whenever conscription or corvee labor depleted the available pool of male labor.

Most early industries were located in rural areas or on the fringes of cities and involved secondary processing of agricultural products. The two World Wars were a stimulus to industrial expansion in response to protected markets. Thousands of small urban industries were set up around a formula of basic imported machinery and high concentrations of teenage and child labor. Wages were low and hours long. Few women remained employed once marriage gave them competing responsibilities at home (Hammam 1980).

Both in terms of scale of employment and provision of higher wages and benefits, the public sector has played a central role in upgrading the employment conditions of Egypt's urban industrial workforce. While women have since the 1820's formed a marginal labor pool to private industry, it was with the birth of the public sector in 1952 that urban industrial employment became institutionalized as a respectable and even desirable work context for young girls and married women alike (Ibrahim 1980).

Public sector demand for female labor came about largely in response to technical assistance from East and West European countries during the late 1950's and early 1960's. European conventions about appropriate male and female tasks in industry were adopted along with imported production processes. These traditional divisions of males into tasks involving physical strength and machines, females into tasks

requiring manual dexterity fit well with Egyptian management ideas and practices.

Expansion of the public sector was accompanied by increased opportunities for women in industry. Labor legislation and the extension of such benefits as transportation, child care, and maternity leaves encouraged female employment throughout marriage and child-bearing years. By 1980, the major employers of female industrial labor were large public sector enterprises and small private employers mainly concentrated in garments, textiles, and food production.

3.3 Recent changes in demand for female labor

Managers noted that the mid-1970's represent a peak in overstaffing as a result of government employment guarantees and the beginning of male attrition due to migration and higher wages outside those sectors where female participation rates are highest. Overstaffing was acute in administrative jobs in these enterprises but was also reported to be a problem in the service-to-production jobs. These are largely male positions involving the transport and storage of materials, resupplying production lines, and in security tasks. Managers in textiles, food processing, and pharmaceuticals said they would welcome attrition in these categories.

However, turnover since 1975 has been highest in skilled technical and managerial positions but managers also report difficulty in recruiting and keeping some types of low-skilled male labor. They cannot compete with higher wages in agriculture, construction, and "open-door" employment opportunities for male workers. Absenteeism is high as a result of high wages for certain types of casual labor and because so many men hold second jobs.

Factory records from two public sector enterprises for the 1970-1980 period show slight declines in the proportionate importance of female workers in an electronics firm, in spite of a rise in absolute female employment. In the spinning and weaving firm, on the other hand, total female employment has more than doubled in absolute terms and the proportion of workers female, although small, has also nearly doubled. Similar trends were reported, with minor variations, in pharmaceuticals and food processing companies. If they are indicative of more general trends, the rising numbers of female workers may reflect a response to shortages of male workers.

TABLE 3.1

Male-Female Employment Ratios

In Two Public Enterprises, 1970 - 1980

<u>Spinning and Weaving</u>	<u>Males</u>	<u>Females</u>	<u>Totals</u>	<u>% Female</u>
1970	14,902	507	15,409	3.3
1975	18,288	845	19,133	4.4
1980	17,848	1,110	18,448	5.9
<u>Electronics</u>				
1970	1,345	1,290	2,635	49.0
1975	1,533	1,395	2,928	47.6
1980	1,430	1,399	2,829	47.8

Source: Factory records, April 1981

It should be noted, incidentally, that there are serious discrepancies between these figures, drawn from factory records, and those indicated

in Table 2.1 in Chapter 2, which is intended to show the serious data problems facing researchers interested in female employment. Factory records are likely to be far more accurate than household surveys. In this case, the number of female workers in this single electronics plant in 1975 are almost exactly double the number reported in the 1976 Population Census for the entire category of electrical assembly and electronics workers and only slightly below the totals reported by the 1977 Employment, Wages and Hours Survey for the entire category of electrical tools and machines. If further proof were needed of the unreliability of female employment figures in existing data sources, this comparison provides it. Yet the statistical sources are all there is and form the basis of researchers' analyses and policy-makers' decisions.

3.4 Female Labor Market

The market for female labor operates under structural constraints sharply different from those affecting males. Women have less geographical mobility in seeking employment. Without educational certification, they are unlikely to emigrate abroad, unlike unskilled male workers. Nor are women likely to circulate in the labor markets involving transport, construction, or migrant farm labor. Lower levels of educational attainments also prevent women from competing for high-paying jobs in Law 43 industries, many of which require a high school degree for low-skill production jobs.

At the same time, increasing numbers of girls are achieving primary and preparatory certificates. Education and rising expectations combine to encourage entry to the formal labor force. Yet these girls, with relatively low levels of educational attainments, find few acceptable

occupations traditionally open to women. In the service sector, for example, the six most commonly entered traditional occupations include only two (maids, salespersons or vendors) in which schooling is not crucial, while the six occupations with highest numbers of women among the non-traditional occupations all require advanced or professional education. In 1976, these occupations compared as follows in terms of female participation (Chaudhry 1981):

Service Sector, 1976

<u>Traditional occupations</u>		<u>Non-traditional occupations</u>	
Teachers	89,668	Accountants	11,056
Stock clerks, other clerical	66,653	Govt. executive officers	9,405
Maids	33,679	Pharmacists	1,790
Nurses	29,925	Lawyers	1,571
Bookkeepers, cashiers	18,159	Managers: gen. or production	1,327
Salespersons, vendors		Electr. engg., technicians	1,215

The remaining traditional occupations include building caretakers, cleaners, social workers, medical doctors, midwives, and government administrators.

The "non-traditional" occupations include many types of engineers (although in small numbers), airline pilots, architects and other professions.

In manufacturing, the occupations in which the largest numbers of women are employed in the traditional category are in the textile and garment industries. Clerical workers in manufacturing enterprises are very numerous. In the less traditional occupations, there are women in supervisory and management positions, in accounting and engineering. While these numbers are still relatively small, as shown in Table 3.2 (based on Chaudhry 1981), they indicate some directions of change. More women have been enumerated as construction workers in manufacturing than in the construction sector, but considering the size of that sector as a growing employer of unskilled males, the small numbers of females are very discouraging.

TABLE 3.2

Major Occupations of Women in Manufacturing, 1976
in "Traditional" and "Non-traditional" jobs ^a

TRADITIONAL		NON-TRADITIONAL	
1. Tailors, dressmakers	23,661	Accountants	1,864
2. Clerical workers	19,751	Chemical process workers	1,304
3. Weavers	5,627	Prod. supervisors, foremen	1,059
4. Spinners	3,272	Medical doctors, dentists	980
5. Food processors	3,179	Construction workers	571
6. Knitters	2,307	Industrial engg. & technicians	569
7. Dyers and others	1,636	Electrical engg. & technicians	541
8. Basketweaver, brushmaker	1,248	Electrical fitters, joiners, etc.	430
9. Fiber preparers	1,210	Machine tool operators, setters	367
10. Building caretakers	1,001	Tool makers, metal grinders	367
11. Shoemakers	745	Mechanical engg. & technicians	358
12. Steno and typist	615	Pharmacists	357
13. Bookkeepers, cashiers	615	Managers: production, general	313
14. Clerical supervisors	612	Chemical engg. & technicians	296
15. Glass, ceramic workers	434	Lawyers	176
16. Rubber, plastic workers	402	Machine fitters	174
17. Tobacco preparers	381	Sheetmetal workers	90
		Civil engg. & technicians	75
		Mining engg. & technicians	45

Source: Population Census 1976, CAPMAS

a; as categorized by Chaudhry 1981.

3.5 Alternative employment strategies in industry

Public sector industrial managers faced with shortages of skilled male workers have chosen among three alternative employment strategies, as indicated in our interviews. Given the broad disparities between male and female labor supplies to industry, and the distinctive constraints of the market for female labor indicated above, these management choices also have sharply different consequences for workers (or potential workers) in the different classes of the Egyptian population. Policy-makers concerned with the differential impacts of these employment strategies are therefore faced with the necessity of evaluating the long-range implications of these management choices.

(i) Changes in wage and incentive structures: This strategy appeals to plant managers who have been operating in overstuffed conditions. It was reported in public sector firms in textiles, food, and pharmaceuticals. The strategy is to trim superfluous workers and finance higher wages for skilled technical workers out of surpluses in the payroll (see B.Vermeulen and G.Papanek 1982). At highly skilled and professional levels, wages may be 3-4 times those of public sector industry in private sector plants, making it difficult to attain market parity. Unskilled manual workers tend to be better paid in the public sector, if benefits are considered. Public and governmental sectors are under pressure to show wage restraint in the interests of combating inflation (ILO 1981). Wage reform is, therefore, unlikely to present a solution to industrial labor problems, taken by itself.

(ii) Replacing male workers with machines: Technology presents an attractive solution to labor problems for industrial managers coming out of engineering backgrounds. Male absenteeism, high labor turnover, problems of discipline or low productivity are often seen as irreversible trends that need radical solutions. It is hard to resist the glamor of highly

automated, up-to-date machinery, especially since the first and second generation of public sector capital hardware is currently in need of replacement. Furthermore, private sector managers can expect to obtain a comparative advantage by early investments in sophisticated machinery that enables them to meet specialized demand for export commodities, such as certain kinds of textiles used in high-fashion clothing manufactured in Europe.

From the point of view of a broader national interest, capital-intensive industrial investments have serious drawbacks (see G.Papanek Overview, R.Lucas 1981). Decisions to increase mechanization appear to be based on the assumption that present male labor shortages will continue indefinitely into the future. There should be no doubt that migration will decline within the next ten years. At a net migration rate of 170,000 per year, over a ten year period, this would mean another 1.7 million Egyptian workers temporarily located abroad. In addition, on-going changes in the educational composition of the male and female labor force will steadily increase the pool of young, partly educated men and women looking for jobs in Egypt, in addition to migrants that will one day return. These are precisely the workers now being eliminated by factory mechanization. A projection of annual labor force creation in the Suez Canal Zone indicates that while supplies of illiterate workers may not keep pace with demand, supplies of those with some schooling but less than secondary education will far outstrip the ability of that region to absorb new workers (Spectrum 1981).

Since a technical or high school degree will in most cases be needed to operate complex production equipment in those firms now choosing the mechanization option, it is precisely the middle group -- literate but unskilled -- that will be faced with declining employment opportunities in Egyptian industry. Especially in the public sector, growing reliance on complex machinery will result in even greater competition with private firms for the scarce workers who have both the technical diplomas and

the high levels of skill required by the equipment. Given the past history of female occupational specialization in Egypt and the low levels of female participation in appropriate technical training, it will also be some time before women workers can be expected to fill this gap.

Population resettlement and investment decisions are also influenced by problems of finding an appropriate capital/labor mix. Our interviews with planners and industrial managers at Tenth Ramadan Industrial Workers City revealed the unfortunate cross-purposes at work in this development. Planned as a new desert community to relieve pressure on Cairo, the projection for its 1995 population is 500,000 residents. Yet all of the industrial projects currently underway are capital-intensive, requiring a minimal workforce. Several plants, including one with USAID financing, will be computerized and require only maintenance and technical staff. Workers will need, at minimum, a high school diploma. The average cost of creating one job in these ventures is four or five times the national average. None of the plants surveyed in this new community has made provision for employing women workers, except a small carpet company.

This planning failure is of particular concern to us, not only with respect to female employment but also from a broader perspective. When new cities are created in Egypt, workers are expected to relocate with their families and not as isolated individuals. The new cities must, therefore, provide earning opportunities for other family members, to replace those probably lost by the move. Although male workers may be forcibly removed from their families in some other countries (e.g. South Africa) or leave families behind in the village for long periods (as in India), this is not the Egyptian practice. When the need for additional jobs is ignored by

planners, it contributes to resettlement failures at a very high price of human and capital losses (Blumberg and Garcia 1981). An appropriate mix of industries that would provide employment for men and women could be an important factor in motivating workers to move to new areas. Yet the widespread ignorance of women's economic activities, perpetuated by faulty statistics and inappropriate stereotypes, contributes to these failures.

Job creation is, of course, only one of several goals for industrial investments. While there may be other compelling reasons for a capital-intensive strategy, they are called into question in the case of industries located at points of intended population resettlement. The social costs of a capital-intensive strategy may be very high.

(iii) Labor-replacement alternative strategy: This third strategy combines the use of medium-level technology with a shift toward a higher proportion of women in the workforce. In our view, this strategy has both high economic and social benefits and does not jeopardize future national development with the risks presented by the other two options.

Public sector managers in some industries are already responding to the availability of female workers and see some advantages in drawing them into their workforce. Companies have begun to reorient their production in order to recruit and train women for jobs formerly restricted to men. Usually this is accompanied by some degree of technological replacement, so that the heavier manual jobs once performed by a crew of unskilled males can be reduced or eliminated.

Managers generally report satisfaction with the ability of women to operate and maintain production machinery. There is universal agreement that women are better suited for repetitive tasks requiring precision, patience and manual dexterity. In some cases, the productivity of female

workers is high enough to enable plants to use fewer shifts,

Managers also feel that their investments in training female operatives are protected because women have a proven record of longer job tenure. Women workers are perceived to prefer the security and benefits of a public sector job to higher wages theoretically available elsewhere. Once hired, women form a more stable workforce because their restricted mobility makes it less likely that they will compete for "open door" employment options or seek work outside Egypt. In one textile factory in Helwan, it was estimated that 10-15% of female workers left their jobs in the first year while this was true for fully 60% of male workers.

In other words, public sector industrial managers accurately perceive that they can benefit from the labor market constraints faced by female workers in general, such as demand restricted to fewer occupational categories, and from the characteristics of the female labor force, such as lower geographical mobility and the need to accommodate the simultaneous demands of their "second shift" of family work.

It no longer seems to be the case, moreover, that women are categorically rejected by employers for training on sensitive machinery. Only jobs that are considered "dirty," "heavy" and "unhealthy", involving high temperatures, dangerous fumes, are deemed unsuitable for women. Much recent research on the health of women at work (referenced in Hunt 1977) supports these decisions, especially in the case of pregnant women workers, but it is of course also true that conditions which are unhealthy for women are equally unhealthy for male workers. In this

case, societal attitudes protecting women especially in their capacity as bearers of children have been beneficial in restricting participation in particular occupational categories. This is also the reasoning followed, for example, by women's associations in eastern European countries that successfully integrated these restrictions into employment regulations and labor laws.

On the other hand, restricting women's access to specific types of occupations can also be seen as limiting women's ability to earn. Working conditions in some industrial plants, particularly in smaller private enterprises, can be as damaging to male and female workers (even though they are theoretically permitted to work there) as the dirty or heavy work from which women are banned by law.

Multiple shifts in many industries do effectively bar women from some jobs (such as dyeing and weaving in textile production, glass bottle production, etc.). These jobs tend to be defined as heavy work since they involve continuous processes such as blast furnaces, kilns, dyeing vats or food-processing machinery. Current labor laws generally prevent women from working between 8 p.m. and 7 a.m., although exemptions are possible (see review of labor legislation affecting females in Chaudhry 1981).

There is some evidence that once management is persuaded on grounds of higher productivity to place women into types of work they have not performed previously, they encounter few problems in reorganizing into two or one-and-a-half shifts. A textile factory that wanted to introduce women workers on a new spinning process successfully made this change. In this instance, combining modern equipment with more women workers resulted in higher productivity, higher output, and fewer shifts.

3.6 Obstacles facing the labor-replacement alternative

Egypt's textile, food, electronics, and glass industries offer examples of successful transitions to an increasingly female production workforce. However, the experiment is often limited to a few sections within the larger factory. Women are sometimes hired deliberately to replace men in lower-skill categories while upgrading programs to train workers for skilled technical positions are limited to men.

The obstacles to greater utilization of women workers in industry fall into two categories: (i) cost considerations, usually derived from constraints on the utilization of women based on existing labor legislation but also including the cost burdens of maternity leave and child-care facilities; and (ii) attitudinal factors, including management reluctance to hire married women workers with children or widening the opportunities open to women workers because of managers' ideas about "suitable" work for women.

Both cost considerations and attitudes are based on conditions typical of the Egyptian economy in the past. The changed circumstances now confronting managers and policy-makers require that the basis on which both costs and attitudes were justified in the past must be re-evaluated in order to address current problems.

An example of this re-evaluation can be found in the new cost calculus we propose in our discussion of child-care facilities (Chapter 7). To anticipate this discussion briefly, the maximum child-care payment (to a worker with 3 children under 6) who obtains an employer subsidy to place her children in a public facility (because there is none at the plant) would amount to LE 7.50 per month. In the past, when there was a plentiful and reliable supply of skilled male workers for this plant, the woman worker would certainly have been more expensive. Now, however, managers

are paying some skilled male workers an incentive bonus, usually an extra week's wages per month. A moderately skilled male worker, with 5 years experience, can expect to earn LE 12-15 per week. Under these circumstances, of course, a male worker can be more costly to the employer.

Such a calculation, based on changed circumstances, obviously leaves out many crucial questions that must also be addressed, such as the numbers of workers per plant eligible for maternity and child care as compared with those receiving bonus payments. Issues of comparative productivity must be considered, and also expected life-time work careers in the same plant, as based on differential tendencies among male and female workers to change jobs. In short, cost calculations based only on legally available supplements to women, or legally mandated restrictions on women workers, are not well suited to management decisions under changed economic circumstances.

This is where the second set of obstacles, attitudinal factors, are so important. For example, when we interviewed managers for this study and mentioned our interest in women workers, managers often concentrated on women's expressed worries about their families to the exclusion of other topics. It was as if managers, in fact, considered these women's family responsibilities to be more important than their work at the plant. Yet the very presence of these women workers on the shop floor is the result of a family decision about the future prospects of children, based on the family's present needs and aspirations. These workers are in the factory because of their children, but these worker preferences may be overlooked by managers holding to conventional middle or upper-class notions of what work is suitable for women.

Of course, these managers are not alone in the view that the family responsibilities of women overshadow other aspects of their work performance -- or that they should. This places workers in a psychological

double-bind with serious economic consequences. Married women with children are made to feel bad that they are on the job and express this feeling by talking about family worries, which are real enough in any case. At the same time, measures supposed to protect women can effectively be used to limit women's access to jobs when they need them.

Both from the point of view of equity and productivity, worker preferences should be considered. If married women and their families decide that the family's economic situation requires an additional income, women already carrying heavy burdens of family work should not face constraints in getting employment.

Labor legislation is frequently mentioned as an important factor in limiting Egyptian women's participation in the economy. Although the labor laws affecting women are outside the scope of this Report, it should be noted that both the legislation itself and its enforcement have come in for criticism by analysts of female labor force participation. In theory, the stipulations of the labor code make it expensive to hire women. While women workers have equal employment rights with men and the labor law stipulates equality of pay for women and men, women are also entitled to pregnancy and confinement leave, after 7 months work for one employer. During maternity leave a woman's job is safeguarded. Employers must provide seats for women to rest. Women also have favorable retirement benefits after childbirth and can legally retire earlier than men. The labor code also stipulates which jobs are legally closed to women, mainly those deemed dangerous to health and/or morals. Night work is limited to certain specified workplaces. Recent changes in regulations (Ministerial Decree No.20 of 1980) allow women to work until 10 p.m. in

weaving and spinning; exceptions are also made for Law 43 joint ventures "where work circumstances necessitate such delay in working hours" (Chaudhry 1981). However, in spite of these recent exceptions, there may still be problems where prohibitions on night work prevent women from entering continuous production jobs that are organized around rotating shifts.

On paper, therefore, the labor code commits employers of females to potential and actual cost burdens and may limit their usefulness. In reality, there appear to be many employers who do not honor the labor code. There are no programs or targets related to enforcing the goal of equal treatment (Chaudhry 1981). Some of the most serious problems are encountered when there are no child-care facilities. Recent revisions (Summer 1981) now require these when 50 women are employed (rather than 100 as previously) or require that employers subsidize the child care costs of individual workers.

Workers are the losers when restrictive legislation is on the books, because employment opportunities may be fewer, but even more when they are not enforced. Firms which have not previously hired women in great numbers may calculate that these expenses and the additional bookkeeping they entail would not be outweighed by the lower turnover or higher productivity of female workers. This is especially likely if management holds to the belief that female absenteeism is substantially higher than for males. In fact, managers with this view may be surprised by the statistics at their own plants that show overall absenteeism rates to be roughly equivalent for men and women. Unmarried and older women have lower rates of absenteeism than groups of men similar in age and marital status.

Rising rates of male absenteeism are linked to alternative employment available to men. While the penalty for missing a day of

work without excuse in the public sector may be LE 1.00 or 2.00, day laborers can earn LE 3.00 to 5.00 in agriculture and the same or more in urban day labor.

These market forces have less impact on women. Their absences are largely due to child care responsibilities and children's illness. This suggests that management investments in child care and health services would greatly reduce the problems that lie at the root of female absenteeism.

Another barrier to female employment in production jobs is based on management perceptions that married women are unwilling or unable to work overtime. Periodic overtime is typical in both public and private sector enterprises and represents an important source of additional worker income. Our interviews show that a sizable majority of married women need the income supplement provided by overtime pay. At the same time, they state that if their base wages were higher, daily output quotas could be increased without extensive overtime. These workers' comments point to a serious problem of productivity but also make clear that workers with second jobs (including women with a "second shift" of family work) are seriously jeopardized when overtime is required.

Widespread stereotypes about what constitutes appropriate work for males and females in Egypt constitute one of the most serious obstacles to women's increased employment in industrial production and to their greater participation in vocational training for such jobs. Early practices of limiting heavy, dirty, mechanical work to men and of segregating men and women in the workplace have led to a fairly uniform pattern today. Men perform heavy lifting, hauling, operating, and repair of machinery. Women are concentrated in assembly-line tasks

that involve repetitive manual operations, packing, labeling, inspecting, and so forth.

For reasons that are not altogether clear to us, the application of these established informal principles of organizing industrial work is very inconsistent when new machine technologies are introduced. For example, even though women have always been defined as being very good with repetitive operations requiring manual dexterity, they are rarely chosen to operate sophisticated electronic machinery that requires precisely these qualifications. Men are still considered most appropriate to operate the machines that replace previously arduous tasks, even when they are no longer "heavy" or "dirty" or "dangerous." This tendency is especially apparent in the skill training courses offered by Ministries and large-scale employers, observed during our interviews. Until late 1981, for instance, women were excluded from all of the industrial training courses offered by the Ministry of Industry. The same tendency is also found in the enrollment patterns of vocational technical schools as compared with commercial vocational institutes (Chapter 6).

As is true in so many aspects of female labor force participation, accurate information is lacking that would make it easier to design methods of change in situations where neither employers nor workers are as productive as they might be. In Chapter 2, we have presented evidence from a variety of sources documenting the scope of the female labor supply to industry. Without an effective demand, however, many of the available workers looking for industrial work may turn to less remunerative and less productive work in the informal sector of the economy.

3.7 The Informal Sector: Implications for Female Industrial Employment

By its very nature, the "informal sector" of any economy defies easy definition and analysis, although important studies have laid the groundwork for such an attempt in Egypt (Lubell and Abdel-Fadil for ILO, 1980). In the case of women in Egypt, informal sector activities present an unusually difficult challenge to social scientists and policy-makers (see also Section 4.5).

From the point of view of increasing the demand for female industrial workers, the following aspects of informal sector economic activities by women should be considered:

(i) The informal sector is undoubtedly a locus of skill acquisition. Those without formal credentials may spend several months or years in informal occupations, acquiring a trade or skill. This equips them to compete more effectively for formal employment. Initial observations suggest, however, that there is more movement out of the informal sector for male workers than for women.

(ii) Informal sector activities are vulnerable to technological and organizational displacement. Displaced workers, who already have relevant skills, should have employment preference but often lose their earning opportunities as a result of displacement, especially if they are female.

The garment industry is a case in point. In Egypt, the idea of ready-made clothing is relatively new; the bulk of the population still orders clothing from private tailors and seamstresses. The Government has recently set a priority on the provision of sturdy ready-made clothing at controlled prices. This is partly in response to rapid increases in the costs of cloth and making up, but also results from the introduction of cheap ready-made clothes from Asia that are affecting consumer tastes.

Past experience in Egypt and elsewhere suggests that women may lose their central role in small-scale production once garment making is

moved to a factory setting, although the evidence is somewhat contradictory. In Indonesia, for example, women have lost an important source of earnings from selling hand-drawn batiks, requiring much skill, because of growing competition from men in factories using a very simple block printing technique that produces lower quality batiks (Wieringa 1980). On the other hand, recent studies in India note an increase in the use of the "putting-out" system among light industrial manufacturers. Wages paid to women working at home are half those earned by male workers in the factory for similar work.

(iii). Centers of informal economic activity suggest possible locations for new industrial development or for recruiting workers through providing transportation to other areas. Such centers can be found in the desert fringes near the Tomb Cities or urban relocation sites such as Ein Shams.

(iv) Better information about wages that women can earn through informal sector activities would provide a better basis for policy interventions favoring more female employment. There is a serious dilemma with respect to women's wages. On the one hand, paying women lower wages than men for the same or similar work is both illegal in Egypt and undesirable on grounds of equity. On the other hand, workers themselves must make employment decisions not on the abstract basis of wage equity but on the basis of the alternative earning opportunities available to them. From this point of view, women with very limited employment options in the informal sector would almost certainly welcome regular employment under acceptable working conditions as long as their earnings are better than the alternatives they can find. While we do not condone wage inequality, we would argue that more careful examination of the alternatives available to women in the informal sector could provide a starting point in the development of employment policies that achieve the following goals, particularly for less educated women:

(a) preserve employment opportunities for women with traditional skills who face displacement from technological innovations or industrial organization by giving them employment preference on the basis of their traditional skills;

(b) use the informal sector as a resource in the development of new vocational training programs by identifying skill acquisition processes that have been successful with traditional skills among less educated persons;

(c) examine alternative earning opportunities to set realistic wages acceptable to workers and in conformity with Egyptian labor legislation. For instance, an experienced seamstress with her own machine and clientele can now earn LE 40-80 per month. Younger girls who sew collars or buttons on a piece-work basis earn about LE 10-20 per month. Taking up a regular factory job is also not without cost to the worker (transportation, inability to supervise children and fit in time for family work, etc.). As a result of daughters' employment, older women must often carry a heavier burden of family work, a point that is almost always overlooked.

Placement of experienced seamstresses in an expanding garment industry would prevent displacement of these workers by competition from cheap ready-made goods and would provide more reliable earning opportunities than a "putting-out" system. Skills acquired by women as part of their traditional education at home, whether used in informal sector work or not, would give them a competitive edge over inexperienced workers, even if these are better educated, provided employers pay attention to such experience in hiring, placement and promotion. Workers with traditional skills could be prepared by short-term training courses on the shop floor for using new industrial machines.

The data-set obtained by the Industrial Population Survey of 5,000 households (Loza 1980) and already discussed in Section 2.4 provides an indication of the potential pool of women with sewing skills. It is likely

that many of these skilled women have been contributing earnings to family income. Blue-collar families living in Industrial Workers Residences near public sector factories show higher than average income contributions by daughters and wives. An unusually high proportion (46%) of families living in these areas also report ownership of sewing machines; in the sample of 5,000 households as a whole, only 25% of families owned one. In families owning a sewing machine, family incomes are above average, but not as high as in families where wives have formal employment.

In short, although the data do not allow calculation of actual incomes earned by women who owned sewing machines, these findings suggest that sewing machine ownership does not simply reflect higher family incomes but that women use the machines to earn some of that income.

From the point of view of demand for women workers, these findings suggest the following considerations:

(i) In families located close to factory sites and with a history of industrial employment, as many as half of the women may have well developed skills relevant to some types of industrial employment.

(ii) These women's opportunity costs are well above zero if they are using their sewing machines to augment family income by sewing for others. Decisions to enter industrial employment will, therefore, be strongly influenced by wages offered in jobs using their skills.

(iii) Few female production workers are educated to high school levels, although more of them have primary and adadeya certificates than males in the same occupations (Table 6.1 in Chapter 6). Managers who set educational certification requirements at excessively high levels will probably not attract the women from this background, who would bring desirable skills and attitudes to their jobs.

From the point of view of labor force trends, additional aspects of informal sector activity are discussed in Section 4.5, Chapter 4.

3.8 Conclusions

Demand for labor is not expressed only at the factory gate. In actual fact, it is communicated much earlier to potential workers through their education and training, through stereotypes, and through the popular media. To create an effective demand for women workers in Egyptian industry, therefore, it is not enough to advertise for women with certain levels of formal education. Perhaps this is even the worst way to do it, as many excellent potential workers from families where industrial work is respected and valued will be excluded by these requirements.

In Egypt, the pathways to respected female employment are increasingly leading through the system of formal education. Since not all members of the society can afford this path, the growing educational emphasis even in industrial employment may well be a hidden time-bomb whose effects will be seen more clearly in later years.

What is required, therefore, is that both policy-makers and employers (especially in the public sector) take a more active, more forward-looking role in developing alternative pathways to employment for women in places where workers are needed. This task is too important to be left to the accidents of parental and youthful choice or to the already overburdened educational system. Employers need to take the initiative in developing vocational training that meets their needs for skilled workers and that draws into the regular labor force those poor and poorly educated women who are now being left standing outside the factory gate.

To put these matters in a broader perspective, increased demand for women workers in industry is not only a matter of individual decisions by factory managers who are considering the costs and benefits of replacing missing male workers by machines or other human beings.

This development also involves the interests of the whole society since all ultimately pay the costs and reap the benefits of changes in employment policy. It is from this perspective that we have stressed the importance of broadening women's employment options in all walks of life and not only among the better educated. That is why, in Chapter 7, we discuss the possible benefits to Egyptian society as a whole of improved child-care facilities for the children of industrial workers through benefits to education, health, nutrition and population growth.

As Egyptian society changes, both men and women require new skills and competence. Increasing women's employment options through increasing the demand for female labor cannot, therefore, simply be considered as a short-term remedy to keep industry operating until migrant male workers return. Growing female participation in Egyptian industrial jobs is a long-range, permanent alteration in the composition in the labor force, not a short-term switch to a workforce considered to be temporary and therefore cheaper. This is most decidedly not our perspective.

In any event, experience in industrial nations has shown some of the consequences of the whole-sale recruitment of female workers and their equally sweeping dismissal after immediate need for these workers had passed. In the United States, the immediate consequence of these changes was one that Egypt cannot afford -- a striking increase in the U.S. birth rate occurred during the "baby boom" after World War II.

On the contrary, we argue throughout this report that the introduction

of more women workers into Egyptian industry represents the extension of modernization and change to sectors of the population that have been touched less than the highly educated. It is surely not in the interests of Egyptian society that employment opportunities should be denied to the less educated. Worsening income distribution or an increase in class cleavages cannot be considered either socially or economically desirable. On the other hand, as our discussion of the informal sector indicates, choices between regular employment, self-employment, and informal sector activities will need to be made by the workers themselves. For them to make these choices, broad options are needed.

In Chapter 5, we discuss the preconditions and consequences of the existing linkages between education and employment for both males and females in Egypt today and in the immediate future. In Chapter 6, we draw the consequences of this analysis and relate it to the materials on demand and supply of women workers by arguing strongly for vocational training programs that use a variety of methods without necessarily requiring long years of formal education.

CHAPTER 4: TRENDS IN FEMALE LABOR FORCE PARTICIPATION

4.1 The broader context of female industrial employment

According to the 1976 Population Census, six economic activities were of greatest importance to female employment and involved 84% of all women enumerated in the labor force; the remainder were scattered over many other activities (Chaudhry 1981). Listed in order of importance, these six types of economic activity were:

Social and related service	25% of women workers
Farming, hunting, poultry	22%
General administration, security	14%
Personal and domestic services	9%
Cotton ginning, textiles, leather	8%
Retail trade	6%

Source: Chaudhry 1981, Table 21, based on Population Census 1976

In other words, while manufacturing industry was not the most important category of economic activity, from the point of view of female involvement, it was not insignificant. Moreover, the above listing does not include some major sectors where female workers play an important role (electronics, food processing, pharmaceuticals, etc.). If these had been included in this tabulation, about 16% of Egypt's enumerated female workers would have been counted in the manufacturing sector. (see p.86 below).

From a policy perspective, another consideration is equally -- or even more -- important. Women workers in industry belong to that part of the population that has been relatively disadvantaged by recent

changes in the demand for female workers and the growing importance of the education-employment linkage.

Some sectors of the Egyptian population cannot afford to educate their daughters, even if schooling is free. Others have not yet understood the significance of formal schooling for girls, in terms of their future prospects for marriage and economic security. Yet others have chosen to limit the contacts between female family members and the world outside the home. For all these groups in the population, respectable employment must remain available for some women who need or want to work and earn, at least at some time in their life. Often this need to earn is unanticipated earlier in life, but given male-female age differentials at the time of marriage and current mortality rates, more women in Egypt can expect to become widows than is normally realized. Particularly if fertility rates decline and maternal morbidity and mortality rates along with them, Egyptian women can expect to live longer than has been the case in earlier generations.

For this reason, regular employment that is not tied to formal educational credentials yet is capable of providing reasonable working conditions, such as industrial production work especially in public sector enterprises, takes on greater significance than the figures on current female involvement suggest.

As argued earlier, differences among subcultures and status groups must be taken into account in examining labor force participation among women. Since Egypt is a highly stratified society, and since status differences are of particular significance in most societies for determining the economic activities of women, generalized stereotypes and observations of Egyptian women are often less relevant than highly

specific characteristics of particular subgroups in the society. The most crucial determinants of female labor force participation, in addition to economic need, are often the attitudes and experiences of specific subcultures whose norms may be at variance with those of the larger society with respect to women's work.

It is therefore desirable for Government policy to discourage managers, at least of public enterprises, from responding to increasing supplies of female labor by raising educational requirements. Experience may show after some time that high educational requirements are not always the best predictors of productive work on a factory assembly line or of harmonious relations within the work group. Instead, a more productive employment strategy should include attempts to locate suitable pools of female labor, provision of adequate wages and social services, and management-initiated programs of high-quality vocational training on the shop floor or in industrial training courses.

In this chapter, we examine selected trends in female labor force participation that we consider to be particularly relevant to women's employment in industry. However, since specific studies of female labor force participation in Egypt are not yet very numerous or sufficiently detailed, we have referred to a broader range of factors than is customary in labor force analysis and used micro-studies and other materials to provide a broad focus for our analysis. A separate analysis of labor force trends related to educational preparation and their implications for class and income differences among sectors of the population appears in Chapter 5.

4.2 Egypt's female labor force in international perspective

Egyptian rates of measured female labor force participation are among the lowest in the world.

As shown in Table 4.1, based on the calculations compiled by the International Labour Office from national census statistics, average female labor force participation rates in the more developed regions are 46% (of the female population aged 15 years and over) and 42% in the less developed regions. By comparison, only 6% of Egyptian females aged 15 and over are enumerated as economically active.

It is clear that these aggregate rates for regions of the world represent very different structural situations, even though the average rates are rather similar. In the so-called less developed regions, females form a large proportion of the economically active population because of their heavy involvement in traditional manufacturing, subsistence agriculture, and wage labor. Their participation rates are likely to be underenumerated.

In the highly industrialized nations, on the other hand, women form a large part of the labor force in the organized sector. In some eastern European countries (where female participation rates are nearly ten times those of Egypt), women are important in agriculture as well as in manufacturing, service, and administrative occupations. Rates are lower in north America, although they are rising very rapidly. The low rates shown for Latin America may reflect problems of underenumeration as severe as those presumed to exist in Egypt (Wainerman 1982).

Egyptian rates are a small fraction of these average rates and only about one-fifth as high as the average rate for Africa (40%). However, Egyptian female labor force participation rates resemble those of some

FEMALE LABOR FORCE PARTICIPATION

IN SELECTED REGIONS AND NATIONS (ILO 1977)

<u>Country or Region</u>	<u>Women workers as a percentage of</u>		
	<u>Female population</u>		<u>Total economically active population (Males + Females).</u>
	<u>Total</u>	<u>15 yrs and over</u>	
Egypt	4.3	6.2	7.6
<u>World:</u>	29.1	43.2	35.0
more developed regions	25.4	46.2	39.7
less developed regions	26.4	41.6	32.8
<u>Africa (total)</u>	24.4	40.2	32.4
Selected African nations:			
Sudan	6.7	11.1	10.6
Libya	2.7	4.5	5.0
Tunisia	4.0	6.4	8.5
<u>Asia (total)</u>	29.2	44.8	34.3
Selected Asian nations:			
Saudi Arabia	2.6	4.3	4.8
Syria	6.0	9.2	11.2
Iraq	2.2	3.7	4.2
Lebanon	9.6	15.3	18.4
Pakistan	5.7	9.7	9.9
Bangladesh	12.1	19.4	17.0
India	26.2	40.9	32.2
Indonesia	20.8	33.6	30.5
Malaysia	21.5	36.6	31.4
<u>North America (total)</u>	32.2	42.5	37.4
<u>Latin America (")</u>	14.1	24.0	22.3
<u>Europe^a</u>	26.6	34.3	32.7
<u>Europe^b</u>	43.9	56.6	43.6

a: Europe (market-economy countries)

b: Europe (socialist countries)

Source: ILO, Labour Force Estimates and Projections 1950-2000, 2nd ed.
(Geneva: 1977)

nations in western and southern Asia with large Muslim populations. Selected African nations with large Muslim populations also have low female participation rates. On the other hand, some of the largest Muslim nations in the world, located in or close to Southeast Asia, have much higher participation rates that resemble those for Asia as a whole. These differences among nations with large Muslim populations, as well as the similarities, indicate the crucial importance of economic and sociocultural factors that affect the propensity of women to enter the organized labor force in occupations that statistical sources record.

While an explanation of these regional similarities and differences are clearly beyond the scope of this study, comparisons place Egypt in a broader context. Economists and planners often use comparative data from other nations to indicate the success or failure of certain development strategies or the utility of a particular kind of policy. Since female labor force participation is ultimately also a part of the international economic pattern and not only a local matter, these differences among nations and regions with respect to women's economic activities must also be seen in comparative perspective.

A specific comparison may be particularly useful. In India, rates of female labor force participation have been declining for several decades. This trend is a combination of two distinct patterns. On the one hand, just as in Egypt, there have been impressive increases in women's participation in some occupations associated with formal education and socioeconomic class (Government of India 1974; Mitra, Pathak and Mukherjee 1980). On the other hand, participation rates have sharply declined -- as in Egypt -- among uneducated, lower-class women. This has been attributed to the loss of women's traditional occupations.

Textile mills have displaced hand-spinners and weavers. Deforestation has eliminated women who worked with forest products. Large dairies have deprived many women of a market for home-made dairy products.

In the Indian case, some of these developments have been attributed to exploitative colonial policies. Others are undoubtedly the effects of technological innovations and government policies since Independence in 1947.

Indian analysts have also attributed policy errors to the neglect of women's economic activities among planners and researchers. Conventional methods of analysis and data-collection have come in for very strong criticism for their failure to reflect women's actual economic contributions (Mitra, Pathak and Mukherjee 1980; Jain 1980, among others).

In fact, an impressively large amount of sophisticated research on these issues is currently being carried out in India, which puts social scientists in that country far ahead of other research in this field. Sixty Indian researchers and planners, particularly concerned with these issues, recently convened in a "Technical Seminar on Women's Work and Employment" organized by the Institute of Social Studies Trust in New Delhi (April 9-11, 1982). Papers from this conference should be of considerable interest to statisticians and labor force analysts in Egypt.

In short, regional and global comparisons provide an indication that the specific problems faced in Egypt are, in fact, part of a wider pattern. Developments in other nations indicate the problems that Egypt will have to face in the very near future. Recognized in time, and given the right mix of highly specific research and sharply focused policy interventions, some of the more damaging problems could be avoided.

4.3 Labor Force Sample Surveys: Trends in female labor force participation

In spite of inconsistencies and defects in these data-sets, LFSS figures show clear trends in female labor force participation over the decade (LFSS 1980 was not available in time for inclusion). In most of our tables and calculations, we have omitted the categories of "agriculture" and "unspecified" for women because of extreme variations in these categories between adjacent surveys (Tables 4.2, 4.3, 4.4).

LFSS figures are generally consistent with Population Survey data but we argue throughout the Report that both sources understate the extent of women's employment in both rural and urban occupations.

(1) The total number of women classified as economically active has increased by 24% over the decade, from 514,700 in 1970 to 637,100 in 1979, if agriculture and unspecified are excluded.

(2) The proportion of women in the labor force has remained remarkably stable over the decade, showing no significant increase in spite of some variations between Survey years.

According to these findings, increased male emigration has not resulted in an increase in the proportion of females who are in the measured labor force.

(3) When service and finance sectors are combined (for consistency with the calculations in the Overview Report by G.Papanek), these combined sectors represent the largest concentration of female employment.

The numbers of women in the combined sectors has grown by nearly 60% over the decade. As a proportion of the total measured female labor force, excluding agriculture and unspecified, these sectors increased from 61% in 1970 to 68% in 1979. However, the proportion of females in these sectors combined has increased only from 17.4% to 19%.

TABLE 4.2

FEMALE EMPLOYMENT BY SECTORS, 1970-1979

[Note: excluding agriculture, unspecified]

Labor Force Sample Surveys

	000's					
	LFSS Rounds					
	1970	1971	1974	1975	1977	1979
TOTAL FEMALE LABOR FORCE (excl. agric., unspecified)	382	373	397	405	499	542
MANUFACTURE, MINING						
(1) Total females	87	67	70	67	69	88
(2) % F laborforce	22.7%	18.0%	17.6%	16.5%	13.8%	16.2%
(3) % total sector	7.0	6.5	5.1	5.1	5.1	5.7
CONSTRUCTION						
(1) Total females	3	3	3	4	5	6
(2) % F laborforce	0.8%	0.8%	0.8%	1.0%	1.0%	1.1%
(3) % total sector	5.3	1.5	1.3	1.6	1.5	1.3
TRADE						
(1) Total females	49	55	49	47	46	57
(2) % F laborforce	12.8%	14.7%	12.3%	11.6%	9.2%	10.5%
(3) % total sector	6.8	6.9	4.8	5.6	5.0	6.2
TRANSPORT, ELECTR.						
(1) Total females	12	10	14	17	21	23
(2) % F laborforce	3.1%	2.7%	3.5%	4.2%	4.2%	4.2%
(3) % total sector	2.1	2.9	3.2	3.6	4.3	4.1
SERVICES, FINANCE (combined)						
(1) Total females	232	238	260	270	357	369
(2) % F laborforce	60.7%	63.8%	65.5%	66.7%	71.5%	68.1%
(3) % total sector	17.4	17.6	16.8	16.5	18.7	19.0

Numbers rounded

TABLE 4.3

FEMALE WORKERS IN MANUFACTURING BY LOCATION

[excluding mining and quarries]

Labor Force Sample Surveys

000's

LFSS Rounds

	1970	1971	1974	1975	1977	1979
<u>URBAN</u>						
(1) Total females	51	54	61	59	61	70
(2) % of all <u>urban</u> females in labor force	16.4%	16.6%	17.1%	15.2%	13.1%	13.8%
(3) % Female labor force	10.0	10.0	12.2	10.7	9.7	11.0
<u>RURAL</u>						
(1) Total females	34	13	8	7	8	17
(2) % all rural females in labor force	16.9%	6.1%	5.4%	4.3%	5.2%	12.9%
(3) % Female labor force	6.6	2.4	1.5	1.3	1.3	2.7

Numbers rounded

(4) Although lagging far behind the services and finance sectors combined, manufacturing is the second largest sector in terms of female participation. If agriculture and unspecified sectors are excluded (Table 4.2), women in manufacturing average 16.4% of the female labor force over the 1971-79 period, excluding unreliable 1970 statistics. These figures decline 1971-1977, with an upturn in 1979 possibly representing an increase in hiring females, also reflected in the female proportion in the manufacturing sector as a whole.

(5) Females in urban manufacturing (Table 4.3) increased in numbers but declined as a proportion of the urban female labor force, reflecting relative gains in education-dependent occupations. (These figures differ slightly from Table 4.2 because of the exclusion of mining/quarries, with very low female participation, and the inclusion of agriculture and unspecified categories, with varying levels of female participation.) As a proportion of the total female labor force, urban manufacturing employment was 11% in 1979, consistent with other estimates.

(6) Females in rural manufacturing (Table 4.3) declined in numbers but the 1970 figures again seem out of line with the rest. Starting in 1971, the trend dips sharply in the middle of the decade but increases at the end. Rural manufacturing employment for females in 1979 was 2.7% of the total female labor force but represents 12.9% of rural female employment.

(7) Female employment in trade (Table 4.2) has declined as a proportion of the female labor force but remained stable as a proportion of the sector.

(8) In construction, transport and electricity (Table 4.2), females are insignificant, in both labor force and labor market proportions. However, it remains to be seen whether women who work as day laborers on construction projects, or in similarly "invisible" ways in this expanding sector have increased in any significant way as the result of declining supplies

women and is discussed in more detail in Section 4.5. (An earlier example of the tendency to categorize women as "unclassified" workers was discussed in connection with Table 2.2 in Chapter 2.) This residual category would therefore tend to grow whenever the supply of women workers exceeds demand, jobs can only be found in the "informal sector" if at all, but women still need a source of income.

(11) Growth in female employment has not kept pace with population growth. The measured female labor force, calculated as a proportion of the total female population in the relevant age categories, has actually declined slightly, according to our comparisons of Census figures from 5.7% (1960) to 5.0% in 1976 (Tables 5.1 and 5.2 in Chapter 5).

This is consistent with several of our earlier findings but does not make it any easier to choose among alternative explanations for the drastic decline of labor force participation among uneducated women discussed in Section 5.4, Chapter 5. Both underenumeration of this sector of the female population and real changes in their access to employment must be considered as explanations for the decline.

If the declining labor force participation of uneducated women is real rather than a statistical artefact, then the absence of growth (or slight decline) in the proportionate size of the female labor force of Egypt may be seen as evidence of a social and economic transformation that has serious implications for the society as a whole. In the absence of major economic improvements in the situation of poorer sectors, the preponderance of educated women in a no-growth female labor force is evidence of a pattern of development in which the needs of middle and upper classes have been met more readily than those of the poor.

4.4 Occupational distribution of female workers

The last two decades have seen significant shifts of women workers among occupations. These shifts largely reflect the changing educational composition of the organized labor force. They also provide evidence for the decline in poorly educated women in the measured labor force by the late 1970's through indications of the increased female participation in education-dependent occupations. As women in the measured labor force, unlike men, increasingly concentrate in occupations that require considerable formal schooling, poorly educated women appear to be moving into the informal sector, i.e. occupations poorly surveyed by existing statistical methods.

The implications of this shift are significant for general employment policy. Many of the occupations into which educated women are moving (clerical, administrative) are those in which there already is overstaffing. If these occupations become increasingly identified as "women's work," and if government employment guarantees continue to channel job-seekers into institutions that tolerate overstaffing, then increases in the supply of educated females to the labor market may further increase the "bunching" of women into a restricted range of occupations. This has happened in many countries.

One of the serious consequences of the clustering of females in a narrow range of occupations (i.e. a high degree of occupational segregation by gender) is a tendency to increase the wage differentials between these occupations and others in which women are not concentrated. In the countries where this has occurred, remedies are not always easy since the wage differentials occur between job categories and not between categories of persons. Nevertheless, the effects on the workers concentrated in the lower-wage categories are the same and it is difficult to escape

the conclusion that wage differentials have come into existence because most jobholders in these categories are females. Given the serious difficulties that this has produced in a number of nations, this pattern should be avoided wherever possible.

To counter trends toward excessive concentration of female workers in a restricted number of occupations, therefore, it is important to develop a wide diversity of occupations as "suitable" for women in order to avoid the problems encountered elsewhere.

A broadening of employment options for women in industry could accomplish several different aims, particularly:

(i) reduce potential crowding of women into occupations, such as clerical work, where overstaffing is already a serious problem from the point of view of efficiency;

(ii) provide earning opportunities for women with less education who can find no place in the occupations where female participation is now rising; and

(iii) provide a stable workforce in a larger range of skills for employers now suffering from the effects of male skill shortages.

The growing concentration of female workers in education-dependent occupations is particularly apparent in urban areas, where the employers are clustered. One difference between types of employers should be stressed in this connection. It has been pointed out that large bureaucracies continue to attract and accept large numbers of jobseekers into already bloated staffs because it is in the interests of higher ranking personnel to do so. Where the power of individuals can be measured more readily by staff size than by output, this tendency is perhaps inevitable. In industrial enterprises, on the other hand, the performance of managers and of the firm as a whole can be measured

more readily than by other means, For this reason, there appears to be less overstaffing in industry, even in public enterprises, than in bureaucratic institutions.

Table 4.4 illustrates shifts in female participation in selected occupations in three urban governorates between 1960 and 1976. (As noted by the compilers of this table, figures have been adjusted to take account of some lack of comparability in occupational categories between the two Censuses; Spectrum 1981.) Some of the changes are particularly pronounced in these areas, showing major shifts in the pattern of female labor force participation.

(1) Female participation has increased in professional, technical, clerical, and administrative occupations in all three urban areas.

In all three areas, about one-third of all economically active women are in clerical occupations; another one-third are in technical and professional jobs.

This rapid shift, considered together with other trends in Egyptian society, indicates some possible future problems. In many parts of the world, this range of occupations has come to be considered particularly "suited" to females, in spite of the fact that these same occupations had earlier been considered especially "suited" to male workers. In some parts of the world, they still are. These historical shifts in standards of suitability, therefore, reflect the social construction of reality (i.e. changing norms) and available labor supplies, rather than any inherent "male" or "female" qualities.

Current Egyptian educational and employment possibilities pose the danger of channelling increasing numbers of women into a restricted number of occupations. Existing hiring practices are perceived by younger women making educational plans. This makes it

TABLE 4.4

FEMALE PARTICIPATION IN ECONOMIC ACTIVITY, BY OCCUPATIONAL GROUP

FOR THREE URBAN GOVERNORATES, 1960 and 1976

I. As a percentage of economically active females

<u>Occupational group</u>	<u>CAIRO</u>		<u>ALEXANDRIA</u>		<u>PORT SAID</u>	
	1960	1976	1960	1976	1960	1976
(1) Professional, technical	23.3	32.9	18.5	33.1	22.8	35.6
(2) Administration	2.0	2.7	1.2	2.2	1.8	2.7
(3) Clerical	9.6	32.1	7.2	26.1	8.3	46.1
(4) Sales	7.6	5.1	5.3	3.9	4.1	1.7
(5) Service	41.8	13.4	42.8	11.9	36.5	5.5
(6) Agriculture	0.3	0.4	3.0	1.1	0.2	0.3
(7) Production & related work	9.1	9.9	15.5	16.5	17.0	6.4
(8) New entrants seeking work & unclassified	6.3	3.6	6.6	5.3	9.6	1.7
TOTALS	100	100	100	100	100	100

II. As a percentage of occupational group (males + females)

(1) Prof. & tech.	25.6	28.2	25.6	30.7	15.6	34.2
(2) Administr.	5.2	13.0	3.6	12.7	4.9	17.4
(3) Clerical	6.8	25.7	5.7	21.3	5.4	34.0
(4) Sales	5.0	6.1	3.4	4.4	1.6	1.8
(5) Service	21.3	12.7	21.8	10.5	13.0	5.3
(6) Agriculture	1.5	6.0	5.0	2.6	0.1	0.4
(7) Production & related	5.6	12.0	8.2	11.8	10.7	12.6
(8) New & unclass.	20.2	21.5	15.7	17.6	14.6	13.2

Source: Spectrum 1981, pp.184-186, based on Population Censuses 1960 and 1976

more likely that girls will enter commercial vocational schools, in the absence of strong indications to the contrary.

Such a development will compound existing overstaffing. It could also have the effect of pulling down wages in these occupations because of an oversupply of available workers,

(2) Fewer women are doing service work.

The recent ILO (1981) labor market report refers to this decline primarily in terms of a decreasing availability of "maids." Since this is a subject of concern not only to uneducated women but also to their actual (or potential) middle-class employers, the subject of women's declining participation in service work cannot be easily dismissed.

For example, the striking decline of female work in domestic service (from 29% in 1960 to 8% in 1976) is probably due to the growing demand for labor in rural areas where wages are also quite attractive. The supply of young village women who used to work in urban middle-class households as domestic servants has declined as a result of competing work opportunities. For middle-class families, on the other hand, the need for domestic help has increased in many families because of higher levels of female employment outside the home in the educated middle class. Since women generally retain primary responsibility for household work, this represents a real problem for many women in the labor force. At the same time, the economic pressures experienced by middle-class families on fixed incomes make it harder to raise wages to attract domestic service workers in urban areas except on a part-time basis. Such arrangements tend to be hard to manage by employers and workers, leading eventually

to a general deterioration of the labor market for domestic service workers. As many writers have commented, relationships between these workers and their employers are highly personalized, which can often lead to difficult work situations, alternatives to which are eagerly sought.

In 1976, a total of 33,679 female workers were still enumerated as "maids." Among the traditional female occupations, they were more numerous than nurses (29,925), building caretakers (10,757), salespersons (18,159) and working proprietors in trade (13,316) but greatly outnumbered by teachers (89,668) and stock clerks/other clerical workers (66,653).

Changes in both demand and supply in this sector of the labor market for less educated women probably do not affect industrial employment directly. It is most likely that the daughters of women who used to work as domestic service workers are entering the labor force, but mainly in other occupations, while the women themselves are probably working largely in the informal sector.

Improving the displaced domestic service workers' access to regular employment could benefit income distribution, unless they are earning more from part-time, informal employment and do not seek regular jobs. We have seen no clear evidence on this point, aside from casual observations. If the only alternatives available require formal schooling which these women lack (and which many of their daughters also will not have if they drop out of primary school), then the decline in female participation in service occupations must be seen as a real loss of earning opportunities for the poor rather than as "progress for women."

Careful field research is needed to gain a better understanding of these problems. When female employment expanded in Latin America, many former domestic workers moved into regular jobs. Possibly, other sources

of family income (from underage males) may now be substituted for women's wages as domestics.

(3) Female production workers, in the three urban areas, increased as a proportion of the occupational group (males + females) but not as a proportion of the measured female labor force.

This important trend is consistent with the changing occupational and educational composition of the measured female labor force, whereby the bulk of the increase has occurred in education-dependent occupations and not in industrial or service jobs.

However, the increased importance of female production workers as a proportion of the labor market in these urban areas (particularly in Cairo where it doubled in the intercensal period from 5.6% to 12.0%) is beginning to reflect the increased utilization of female workers in areas of male shortage.

(4) Sales occupations have declined slightly in their importance in the female labor force. This range of occupations has been relatively less significant as a "traditional" source of employment for women in nations where cultural and social norms tend to restrict the contact between women and unrelated males. Women's reluctance to enter into an occupation that requires constant interaction with the unknown public is reflected in some of the difficulties that may be met with in attempts to expand women's employment options. For example, one of the elements in the success of the training program for women in carpentry and furniture making (documented in Section 6.5) was the provision of socially acceptable working conditions. This kind of work is often rejected as "unsuitable" for young women when shops are located on the roadside in busy urban neighborhoods because of the constant flow of

pedestrian traffic. When enclosed workshops are provided, women workers adjust readily to interaction with known male co-workers (as is also the case in factories). They also readily carry out physically demanding tasks that middle-class norms define as unsuitable for women (e.g. carrying lumber) because they are well paid and well treated at the workplace.

Since the linkages between formal education and employment in the regular labor force have been particularly important in the case of Egyptian women, the subject of education deserves special consideration. The next chapter contains a detailed discussion of the education-employment linkage. A separate analysis of male-female differentials in labor force trends related to education appears as Section 5.3 in the next chapter.

4.5 Women in the informal sector

In official labor force statistics, there is a residual category among economic sectors for "activities not adequately described." In 1977, this category represented 2.8% of all workers but 12.0% of total female employment. In other words, unspecified activities rank higher than all other sectors except agriculture and services in the occupational distribution of women workers. Even more striking, 32.2% of this unspecified sector is female, nearly double that of the next highest sector, services at 18.7%.

Very little is known about the workers in this residual category, except that the size of the category has greatly increased over the past 20 years. In 1961 it represented only 2.7% of total female employment, in 1971, 9.0%.

In the absence of more detailed studies, we can only make informed guesses about the sources of growth in unspecified economic

activities for women. Self-employment in the home is known to be one such activity. Self-employed men are more likely to have a commercial shop or to practice a trade recognized as fitting into one or another of the standard economic sectors. Self-employed women, by contrast, are more likely to be engaged in simple home production, such as -- in urban areas -- seamstresses (khayataat) or women who produce food for sale in their homes. It is not clear to us whether enumerators would recognize these activities as fitting either trade or manufacturing sector definitions. (See also Section 3.7, Chapter 3)

Field studies of poorer urban neighborhoods reveal a variety of simple production activities carried out by women in their homes (Rugh 1979). Some of these entail recycling cloth, paper, and other discarded items. Invariably, the maximum monthly earnings are well below the minimum wage.

A survey of low-income families at a welfare center in one of Cairo's poorest neighborhoods in 1980 found that 74% of the principal adult females had income-generating activities but that only 6% had regular jobs. The rest did piece work at home (21%), service and domestic work (27%), street corner peddling or related work (7%), and incidental work, such as poultry raising (14%; Rugh 1980).

Another work category that may fall outside the standard economic sectors contains those ill-defined, largely traditional occupations which are often lumped together in the "informal sector" for lack of a better classification system. This would include hawkers, peddlers, petty traders without shops, traditional transport workers (porters, water carriers, donkey cart operators).

On the assumption that many of these informal sector workers were nevertheless enumerated by the Population Census, an analysis of the 1976 figures categorized a total of 334,000 workers to fit into the "informal sector" (Abdel-Fadil 1980). This analysis pointed out, however, that females were significantly missing from these statistics, both as unpaid workers and

as unreported servants. Simple observation in urban districts reveal that women are much in evidence as street vendors, water carriers, and petty traders in all but the most affluent neighborhoods.

Small unregistered workshops, operating outside the law, are another significant source of unreported non-formal employment for urban women. In these workshops, girls may be hired without regard to minimum age requirements, paid less than minimum wages, and work in unventilated back rooms of private apartments. Some observers believe that this type of employment is on the increase because of changes in import legislation which have facilitated the smuggling of capital machinery, such as looms and knitting machines.

These scattered observations indicate the dimensions of female employment in unclassifiable or informal occupations. The fact that this category has grown to include 12% of officially recorded female labor force participation, in addition to what must be a fairly large unreported female working population, has several implications for our analysis of the female labor force.

(i) However it is defined (see Lubell and Abdel-Fadil for ILO, 1980) the "informal sector" in Egypt has tremendous capacity for absorbing labor. In the case of females, informal sector employment has grown faster than any other economic category. Although some of this growth may be due to better reporting, there is as yet no evidence of improved survey methodology.

(ii) The available pool of female workers has expanded at a faster rate than the economy's capacity to generate regular employment for women, a point also suggested by other evidence, already cited.

(iii) For at least some women, informal activities may be preferable to a regular job, because they are generally (not always) more readily integrated into domestic responsibilities, child-care, and care for animals in rural areas. It might be argued, therefore, that it is important to distinguish between

women workers available for full-time work and those whose life circumstances or personal preferences lead them to informal sector, irregular, and part-time work.

These distinctions may not be permanent. Informal sector work can be a transitional step to regular employment. A study of women in a poor Cairo neighborhood found some women who had first worked under very poor conditions and at low wages in irregular, informal jobs but who later obtained jobs in small-scale industry. Some women even found jobs in the public sector but were at a disadvantage compared to women with primary or adadeya certificates (Rugh 1980).

Among "informal sector" employment one would have to include the desperate measures taken by peasant migrants to cities and others who will take whatever paid work they can find. One peasant woman, interviewed by a social science researcher, was found to have "rented" a job as a hospital attendant from the actual job holder (Tucker 1979). The job holder earned LE 18-20 each month, of which she paid about LE 5 to the "job renter" who presumably pocketed the tips routinely received for such work and did not report them to the interviewer. This woman was working as a "day laborer" but had applied for a permanent position in response to an advertisement. Although she was literate, she failed a test in "dictation" and did not get the position.

This fragmentary information on women in the informal sector suggests a hypothesis about the age distribution of women workers in the regular and informal sectors. Our evidence clearly shows prejudice against hiring "older women" (over 30) and married women in industry as new entrants.

Quite possibly, the two sectors are complementary in terms of

the female age distribution. Extremely young and underage females may be most numerous in the informal sector, as well as women in their thirties and older, while regularly employed workers cluster in the age groups 18-30. Among the exceptions to this distribution would be women staying on jobs where early retirement is possible at age 45 and where they cannot be easily dismissed. An increase in the tendency of workers to stay on the job has already been noted in reference to the age distribution of the labor force as a whole and the high proportion of married women in production work.

Since educational participation has also risen very rapidly among females, younger women are much more likely to be educated than older ones. In 1976, 85% of high school graduates were still under 30 years old. These women would be neither extremely young nor in the upper age groups, further reinforcing the finding that women with better educational attainments play a major role in the organized sector.

However, given the recent rise in drop-out rates from primary school (Section 5.6), poorly educated young girls who enter informal sector employment at very young ages probably have declining chances of ever getting a regular job. Since the increases in drop-outs are particularly marked for girls, especially in the fifth grade, chances are that these young people have entered employment with very few skills and face a bleak future as workers.

4.6 Summary

General labor force trends for Egyptian women provide the broader context for our analysis of female industrial employment and its expansion.

Three general trends are supported by the data:

- (1) present trends encourage further overstaffing
- (2) uneducated women, mostly poor, are being excluded
- (3) demand for women in industry is insufficient, in spite of an ample supply of female labor.

Drawing on a variety of data sources, we present the following major points in this chapter:

(i) Female employment in manufacturing averaged 16% of female employment throughout the 1970's (if agricultural and unspecified workers are excluded), second only to services and finance.

(ii) Egypt's measured female labor force is one of the smallest in the world, at about 6% of females aged 15 and over, compared with 40% for Africa as a whole and 46% for the more developed nations, on average.

(iii) Although Labor Force Sample Surveys show a 24% increase in the total number of "economically active" women over the 1970's, the proportion of females in the labor force as a whole has remained remarkably stable during this period. According to our calculations, based on Census figures, the measured female labor force declined slightly as a proportion of the female population aged 10 and over (Tables 5.1 and 5.2, Chapter 5). This point is closely related to the remarkable decline in labor force participation by uneducated

females discussed in Chapter 5.

(iv) The occupational distribution of female workers, especially in urban areas, shows increasing concentrations of women in "education-dependent" occupations in which overstaffing is already a problem. Although increasing female involvement in these occupations is a sign of growing acceptance of women in higher status positions, workers and employers would ultimately benefit more from a broadening of employment options than from a "bunching" of females into a narrow range of occupations,

(v) Declining female participation in service occupations is more difficult to interpret, given the tendency to underenumerate women in less visible jobs. Before it can be seen as a sign of "women's progress," however, it must be considered in the context of the large drop in labor force participation by uneducated women, which may be due to underenumeration or a real consequence of labor market changes, or both.

(vi) Female economic activities in the informal sector remain least well understood but represent an important source of income for women, especially those losing access to regular employment. Detailed further research is needed to document whether and to what extent these less educated and poorer women have been pushed to the margins of the economy.

CHAPTER 5: EDUCATION-EMPLOYMENT LINKAGES: WOMEN, MEN, CHILDREN5.1 The Egyptian Dilemma

Like many other nations, Egypt is caught in a peculiar dilemma with respect to women. As a result of great progress in female education, an increased supply of educated women has come into being in a society and economy not yet fully prepared to give them a place commensurate with their needs, expectations, and qualifications. Yet the urgency with which they seek such a place is enhanced by the economic pressures felt by the middle class, to which many of these women belong.

The progressively growing participation of women in all levels of formal education in Egypt is highly desirable. It is not a process that can or should be reversed. On the contrary -- since 85% of the female population in 1976 were illiterate or could only read and write, the expansion of educational opportunities for growing numbers of Egyptian women should be a matter of the highest priority.

Yet under present conditions, serious imbalances can be observed with regard to the employment opportunities available to educated and uneducated women. According to Egyptian statistical sources, many less educated women seem to have disappeared from the measured labor force between 1960 and 1976 (Tables 5.1 and 5.2). It is hard to know to what extent these figures depict the reality.

But whether it is real or a statistical artefact, the very large labor force share of highly educated women in Egypt today represents a serious distortion. If real, it shows that a significant sector of the Egyptian population has lost access to regular employment. If an artefact, it is highly misleading to labor force analysts and policy-makers. In this chapter, we analyze the linkages between education and employment for both males and females, in order to locate points for appropriate policy interventions that could increase female participation in regular jobs in industry.

It may be that the experience of other developing nations can suggest an explanatory model for the Egyptian situation. In India, for example, technological innovations in agriculture, services, construction, and traditional crafts production have deprived many uneducated female workers of their usual sources of income. As a result of these changes, women in traditional occupations -- which often require high levels of skills not readily transferable to new production techniques -- have suffered severe losses in access to income-earning work. Although measured labor force participation has increased among educated women, the total size of the educated sector of the population is so much smaller than that of the uneducated that Indian women as a whole show declining labor force participation rates (Government of India 1974; Mitra, Pathak and Mukherjee 1980).

Changes in the organization of production and the location of industries have also had adverse effects on the employment chances of women with certain types of skills in developing nations, such as Indonesia. For example, as a result of changed methods of agricultural production and the introduction of technological innovations, such as rice hullers, massive numbers of women from landless families have lost customary opportunities for wage labor (Timmer 1973; Collier et al. 1974; Timmer 1974).

In short, a pattern of declining access to income-earning opportunities among uneducated women in both rural and urban areas is increasingly observed in several developing nations, suggesting the possibility of similar patterns in Egypt. At the same time, in these other nations as in Egypt, there are more educated women and more of them are in the labor force than before.

Egypt, like these other developing nations, is thus confronted with two rather disparate developments which are nevertheless closely linked. Finding a solution involves fundamental issues of social justice and economic

efficacy. Two rather contrary developments are occurring simultaneously. Since they both concern female labor force participation, there is a strong tendency not to examine them separately. Not to do so can lead to highly misleading policy conclusions, as we argue in this chapter.

On the one hand, uneducated females (often poor) face the loss of traditional earning opportunities and must often seek alternatives that are even less remunerative.

On the other, employment opportunities are opening up for more educated women, usually in the modern sector and especially for women from families that have been able to provide years of education but are now under some economic strain.

Failing to disaggregate these separate trends can lead to serious misperceptions. For example, in a recent paper on "Women's Share in a Development Strategy" (Ijlal Ismail Hilmi 1981, as reported in Al-Raida 1982), it was argued that the declining participation of women in rural work is evidence of a "shift to better paid jobs requiring more technical training." This interpretation holds true only if it is the same cohort of women leaving rural work who are undergoing the shift to better jobs, not if a quite different group of women obtains technical jobs while those who are displaced are left with nothing.

The newer entrants to the labor market are often the first women in their families to seek employment outside the home. Poor women who have always had to work and earn, especially if they are primary earners, tend to be the ones to suffer most seriously from displacement.

The two groups are clearly not directly competitive with each other for specific jobs. Yet policy choices favoring one group inevitably have adverse effects on the other -- unless specific measures are taken to prevent it. The central issue is the extent to which formal education for women can and should be the pathway to regular employment.

5.2 Conceptual model for the analysis of gender, education and employment

A full critical review of available data sources on education and gender in the Egyptian labor force is beyond the scope of this Report. Several analyses of relevant materials have already been carried out (Issa 1979, Clatanoff 1979, Youssef 1979, Korayem 1981, Chaudhry 1981) and our discussion should be considered in the context of these fuller analyses of aggregate data sources. (see also G.Papanek Overview 1982, B.Vermeulen and G.Papanek 1982).

Several of the trends chosen for discussion in this chapter appear to contradict common knowledge about Egyptian women and their work. In spite of these contradictions -- more precisely, because of them -- it may be useful to review available data on women's education and labor force participation from a somewhat different perspective. The strategy we will follow is to emphasize comparisons between males and females with respect to education and employment as a first step. These comparisons make sense only if they are further disaggregated in terms of the associated factors of socioeconomic class and levels of educational attainment.

On the basis of the interaction between gender and education, four major sectors should, therefore, be distinguished in the Egyptian labor force and the comparisons should be made along both axes:

- | | |
|---------------------|------------------------|
| 1. educated males | 2. educated females |
| 3. uneducated males | 4. uneducated females. |

Each of these four sectors has a different profile in the labor force.

Occupational segregation by gender is a feature of all economies on which data are available, even though there are considerable differences in degree among nations. Even where high levels of female labor force participation and equal access to all occupations are matters of public policy, it is well known that in many occupations there are differences in

the relative participation levels of males and females. Within a given occupation, there are usually also differences in the extent to which males and females reach high positions in the occupational hierarchy.

In Egypt, the existence of occupational segregation by gender is clearly recognized in the expressed preferences of both workers and employers for certain types of jobs by men or women. These preferences are usually so obvious that little thought is given to analyzing the reasons why they should exist. They are taken for granted. In other words, occupational segregation by gender is a matter of shared norms, not a question of specific prohibitions, except for those made explicit in Egyptian labor legislation.

Wage differences can also be seen as evidence of occupational segregation by gender, as one of its consequences. In Egypt, while wages in the same occupation and at the same skill level are usually the same for men and women, average wage differences among males and females are approximately 30% (G.F.Papanek Overview Report, 1982, Table 5, p.52).

Differences among socioeconomic classes are usually associated with differences in educational attainment, in Egypt as in most other nations. Members of different class and status groups in the society differ not only with respect to absolute income but also with regard to shared values that influence income allocation to different kinds of expenditures. In effect, values concerning the importance of education are among the most important distinctions between members of different classes. Status is closely related to educational attainments and the occupations linked to them.

But education is generally not valued in the same way for males and females, even within the same class or indeed in the same family. In Egypt, education appears to be valued extremely highly for both males and females

at higher class and status levels but more sharply differentiated by gender in the lower classes. These differences are also associated with the strength of segregation enforced between males and females in everyday life. In Egypt, as in many nations with large Muslim populations, female education appears to be least highly valued in those sectors of the population where male-female segregation is considered most important. For example, while female illiteracy is often associated with poverty, it can also be found in economically comfortable families who have chosen a particular lifestyle in which women do not participate in the public sphere of activities outside the home.

Class differences may be transcended by upward social mobility, often supported by educational attainments that enable individuals to seek work in better paid occupations with higher status connotations. But this process often differs for males and females, since women's social mobility largely depends on the social position and attainments of fathers and husbands.

The relationships between educational attainments, social mobility, and socioeconomic class are obviously not linear but tend to be marked by sharp discontinuities. In Egypt, for example, completion of high school marks a significant milestone for women. It is only at this level, for example, that significant proportions of women begin to be enumerated as "economically active" (Tables 5.1,5.2,5.3).

We conclude from our analysis in this chapter, emphasizing the fourfold distinctions of gender and educational attainment (associated with class) that if the educational pathway is seen as the primary pathway to regular employment for women, this may contribute to increased cleavages among classes -- even if individual women can successfully use the system for self-improvement and upward social mobility. A solution of the dilemma discussed at the outset may well require important policy changes, or even a reversal of the education and employment policies developed in the last two decades.

Among males, levels of educational attainment tend to be closely correlated with the status and income associated with their chosen occupations. Illiterate men, by definition, do not enter education-dependent jobs. Except in extreme emergencies, highly educated men do not seek jobs normally done by the illiterate.

Among females, the relationship between educational attainment levels and the prestige and income of chosen occupations is not linear but shows sharp discontinuities. Since these discontinuities are based on differential investments in female education, they tend to correspond also with distinctions among socioeconomic classes.

From a policy perspective, these differences in education-employment linkages between males and females can be summarized as follows:

(i) Strong linkages between employment and educational preparation are most important to the middle class. Formal education is the pathway by which women from this class background enter modern sector employment. It is, therefore, greatly in the interest of the middle class to emphasize the role of education in drawing women into the labor force.

(ii) Education-employment linkages are weakest among the poor, because they cannot afford the initial educational investments needed for modern sector employment, particularly the indirect costs of foregoing their daughters' earnings before they marry. The work generally available to less educated females has traditionally not required formal schooling, although other types of skill training (especially from mothers and female relatives) have been very important.

(iii) Education-employment linkages are increasingly emphasized by industrial managers for occupations previously open to less educated women, because of an ample supply of labor. As discussed in Chapter 6, industrial productivity and income distribution would both be improved by finding substitutes for formal educational requirements (above basic levels) such as vocational training programs in industry.

5.4 Male-Female Differentials in Labor Force Trends Related to Education

Trends affecting women are highlighted by comparisons among males and females as well as among levels of educational attainment within same-sex groups.

(1) The dramatic decline in uneducated women's participation in the measured labor force between 1960 and 1976 is not accompanied by similar trends among men.

The following compilation shows the extent of changes and differentials.

Poorly educated* men and women in Egypt's population and labor force

	<u>Males</u>		<u>Females</u>	
	as proportion of		as proportion of	
	<u>Population</u>	<u>Labor Force</u>	<u>Population</u>	<u>Labor Force</u>
1960	89.6%	92.9%	96.5%	86.3%
1976	71.1%	82.9%	85.6%	46.4%

Source: compiled from Tables 5.1 and 5.2, based on Population Census 1960 and 1976, CAPMAS, for population aged 10 years and over.

* illiterate and read/write combined

At the same time, however, the numbers of uneducated females in the population increased from 8.6 to 11 million, as a result of population growth and a decline of only 11% in female illiteracy during the 16 year intercensal period.

Assuming that uneducated women maintained the same level of labor force participation, one would have expected the 1976 Census to show about 560,000 uneducated women in the labor force instead of only about 300,000 (Tables 5.1, 5.2). In other words, on this hypothesis there has been a net loss of 260,000 poorly educated women, or about 40% of the total measured female labor force in 1976. Among illiterate women, participation rates declined by 50%, from 5.4% in 1960 to 2.6% in 1976.

Labor force declines on this scale are not trivial and require more thorough explanations than have been offered by available studies.

TABLE 5.1

Educational Status and Economic Activity, 1960

Females and males, 10 years and above

I. FEMALES

<u>Educational Status</u>	<u>Total Population</u> ^a		<u>Economically Active Population</u> ^b		% of same-sex group of same educational status (3):(1)
	Number (1)	Percent (2)	Number (3)	Percent (4)	
Illiterate	7 524,198	84.2%	404,230	79.0%	5.4%
Read & write	1,095,002	12.3	37,314	7.3	3.4
Less than Intermediate ^c	99,425	1.1	6,678	1.3	1.1
Intermediate	194,451	2.2	46,153	9.0	23.7
Above Inter. less than Univ.	6,744	0.1	5,391	1.0	79.9
University & adv.degrees ^d	15,876	0.2	11,701	2.2	73.7
TOTALS	8,935,696	100.0	511,467	100.0	5.7
<u>II. MALES</u>					
Illiterate	5,040,052	56.9	5,005,963	66.4	99.3
Read & write	2,894,569	32.7	1,998,722	26.5	69.1
Less than Intermediate ^c	197,641	2.2	132,100	1.8	66.8
Intermediate	586,743	6.6	272,129	3.6	46.4
Above Inter. less than Univ.	17,218	0.2	15,959	0.2	92.7
University & adv.degrees ^d	124,165	1.4	112,972	1.5	91.0
TOTALS	8,860,388	100.0	7,537,845	100.0	85.1

SOURCE: Population Census 1960, Table 31, CAJMAS

a: excludes unclear educational status
 c: incl. primary. ad. adv. up to Intermed.
 d: Census provides detailed breakdown

b: excludes unknown econ. status, no activity, but includes persons with unspecified econ. act., looking for work but not worked before.

TABLE 5.2
Educational Status and Economic Activity, 1976
 Females and males, 10 years and above

I. FEMALES

<u>Educational Status</u>	<u>Total Population</u> ^a		<u>Economically Active Population</u> ^b		
	Number (1)	Percent (2)	Number (3)	Percent (4)	% of same-sex group of same educational status (3): (1)
Illiterate	9,377,846	72.5	241,437	36.6	2.6
Read & write	1,696,179	13.1	64,748	9.8	3.8
Primary ^c	732,649	5.7	17,948	2.7	2.4
Less than Intermediate	464,006	3.6	23,829	3.6	5.1
Intermediate	509,954	3.9	193,289	29.3	37.9
Above Inter. less than Univ.	34,351	0.3	25,075	3.8	72.8
University & adv. degrees ^d	128,726	1.0	93,198	14.2	72.4
TOTALS	12,943,811	100.0	659,524	100.0	5.0
<hr/>					
II. <u>MALES</u>					
Illiterate	5,731,838	42.6	5,139,769	55.8	89.7
Read & write	3,839,489	28.5	2,499,497	27.1	65.1
Primary ^c	1,398,073	10.3	390,131	4.2	27.9
Less than Inter.	893,624	6.6	193,188	2.1	21.6
Intermediate	1,094,866	8.1	564,374	6.1	51.5
Above Inter. less than Univ.	58,690	0.4	48,439	0.5	82.5
University & adv. degrees ^d	446,414	3.3	374,882	4.1	84.0
TOTALS	13,462,994	100.0	9,210,280	100.0	68.4

SOURCE: Population Census 1976, Tables 5 and 17, CAPMAS

a: excludes unclear educational status
 c: 1960 Census included primary school
 with "less than Intermediate"

b: excl. unknown econ. status, "no activity,"
 includes unspecified
 d: Census provides detailed breakdown of degrees

Participation rates of economically active women, 10 yrs and over,by educational attainment (1976 Census)

(Selected Governorates Only)

(Percentages of economically active women to total population of women, 10+,
in each level of educational attainment)

<u>Educational attainment</u>	<u>Governorate</u>		
	<u>Cairo</u>	<u>Alexandria</u>	<u>Port Said</u>
Illiterate	4.20	3.66	1.76
Can read and write	4.38	4.30	2.55
Primary graduate	3.48	0.02	2.01
Between primary & secondary	6.89	6.39	4.20
Secondary graduate	35.24	34.54	54.0
Between secondary and university	70.83	67.67	75.42
University graduate	72.28	70.02	74.25
Post Graduate	80.37	72.0	83.33
Masters	89.33	88.1	100.00
Doctorates	89.8	87.1	---
Unclassified	4.4	2.26	1.63

Source: Population Census 1976, CAPMAS (Calculations from Spectrum 1981)

Among males, by contrast, persistent high levels of economic activity among the uneducated (90% in the labor force, 1976) show that the types of work done by this sector of the population have not disappeared, at least for male workers. The need for earnings has clearly not declined.

What then explains the "disappearance" of the 260,000 uneducated women whom one would have expected to show up in the 1976 labor force?

Explanations must encompass both underenumeration and changes in the social and economic situation of the population.

(i) Possible underenumeration: although none of the sources available to us for this study provide satisfactory answers, the underenumeration of female workers has been noted world-wide in many studies. Although women workers in many nations have assumed new importance as earners and in the eyes of economic planners, existing data collection methods are particularly unreliable with respect to women in less prestigious occupations, part-time workers, and self-employed workers (Mitra, Pathak and Mukherjee 1981). Existing data collection methods, which usually depend on interviews with heads of households, tend to overlook women's economic activities (Zurayk 1979). Categories adequate for the analysis of men's economic activities are often misleading in the case of females or simply inapplicable. Studies in Latin America have shown wide divergences between the findings of intensive sample surveys and population censuses with respect to reported economic activities of women, although surveys and censuses were often closely similar in their findings regarding men (Wainerman 1982).

In Egypt, underenumeration of females has been noted for both rural and urban areas. On the assumption that uneducated women in the labor force are distributed geographically like such women in the population as a whole, 70% would be rural, 30% urban. With respect to female agricultural workers,

labor force sample surveys show such extreme fluctuations between adjacent survey years in the category of female agricultural workers that their enumeration procedures should be considered suspect (B.Vermeulen and G.Papanek 1982; ILO 1981). Population Census figures may suffer from the same defects, but we have seen no data on this point.

In urban areas, Census figures show a marked decline in the numbers of domestic service workers but the decline is probably insufficient to account for the decline in the uneducated category as a whole, as suggested by the ILO (1981). Moreover, it is unclear whether this decline is real or due to underenumeration (i.e. a shift from full-time to part-time work would decrease the likelihood of enumeration for a worker).

To explain the decline entirely on grounds of underenumeration, however, would require the following conditions: (i) underenumeration in 1976 but not in 1960, at least not on a large scale; (ii) underenumeration of both female agricultural workers (70% of uneducated women workers, we assume, are rural) and of female domestic workers (important among urban workers) to explain the decline. Careful methodological research is, therefore, needed to investigate these possibilities and develop methods of correcting errors.

(ii) Real declines: The evidence here is contradictory. If rising agricultural wages are also available to women (no clear evidence), young uneducated females who would earlier have migrated to cities as domestic service workers might be staying in rural areas. The supply of potential domestic service workers would therefore decline. In response to economic pressures felt by middle-class urban families, demand for full-time domestic service workers may also have declined. If the wages offered did not rise in response to declining supply, more workers may have shifted to a part-time pattern. Anecdotal evidence and micro-studies indicate a shift to informal sector work, in the absence of demand for uneducated women in regular employment, as already discussed elsewhere in the report.

Further studies examining these changes could usefully focus on two other hypotheses to explain real, rather than methodological, changes in female labor force involvement among the uneducated;

(a) On the assumption that female labor force participation responds to changes in total household income, rates may be expected to decline among population sectors (and in time periods) characterized by rising real wages for adult males and for children. There is no evidence of widespread increases in real wages in population sectors where uneducated females are most numerous for the intercensal period, except possibly in families of migrant workers sending home regular remittances. The size of this group is not known.

(b) Powerful changes in attitudes about female public participation could result in women's withdrawal from paid employment, as has happened in some western Asian nations. However, this hypothesis would not explain a highly differentiated pattern, such as the one found in Egypt (and India) where participation rates rise for educated women and declines are found only among the uneducated, except under conditions of exceptionally deep cleavages between classes in the society. That may be why further investigation may be useful.

(2) While the proportion of highly educated persons (high school and above) is very small in the population as a whole for both males and females, highly educated males were in the labor force in proportion to their population share in 1976 but highly educated females constituted nearly half the measured female labor force. Here again, male-female differentials dramatize the point.

In 1976, only 5.2% of all Egyptian females (aged 10 and over) had attained high school or university educations. Yet this tiny group accounted for 47.3% of the measured female labor force (Table 5.2), easily leading to the conclusion that Egypt's working women are indeed very well educated.

In order to assess policy options, it is therefore important to place such findings in the broader context of education-employment linkages for the population as a whole.

For example, if employment policies are increasingly based on the assumption that formal education is a necessary precondition to female employment (but not for males) this could lead to the neglect of interests held by poorer sectors of the population in the employment of at least some women in regular jobs. Little attention will then be paid to alternative pathways to employment for those who cannot afford long education.

Moreover, as noted, women in education-dependent occupations often work in institutions already seriously overstuffed as a result of government guarantees of employment. Further emphasis on education-dependent employment for women, coupled with the neglect of alternative entry paths, will have very adverse effects on both productivity and income distribution.

Finally, false assumptions about the causes and preconditions of increased female labor force participation may lead to neglecting those sectors of the economy in which uneducated females are most likely to be active, such as marginal enterprises outside the reach of Egypt's labor legislation who offer low wages and no employment security.

(3) Male and female labor markets in Egypt are highly differentiated according to educational attainments. For reasons of culture and social structure, the differentiation is likely to be even more pronounced for females.

Male-female comparisons that fail to take account of this differentiation are likely to be misleading.

Status constraints limit female occupational choices even more severely than men's. For example, while a well educated Egyptian male facing severe economic pressure may drive a taxi for supplemental income, his well educated wife is much less likely to work as a domestic servant, except in situations of really extreme stress.

Among males, a three-fold distinction can be made with respect to education-employment linkages, as shown in Tables 5.1 and 5.2:

(i) uneducated males who are in the labor force in very large numbers, showing that the poor must work to survive;

(ii) men educated to low levels (primary and adadeya), of whom only about 25% were in the 1976 enumerated labor force, showing either their inability to obtain work or their involvement in continuing education;

(iii) the highly educated, who are in the labor force in large proportions, although fewer of them are economically active in 1976 than was true in 1960.

Among females, a three-fold distinction cuts the measured female labor force into somewhat different sectors:

(i) women who are uneducated or educated only to levels below Intermediate, all showing extremely low recorded participation rates;

(ii) women with Intermediate education, whose participation rates rose steeply between 1960 and 1976 (from 23.7% to 37.9%) although male participation rates at this level rose only very slightly (from 46.4% to 51.5%), showing this to be the true break in the distribution;

(iii) highly educated women whose participation rates are comparable to those of males, although slightly lower, showing the very high propensity of these women to seek and obtain jobs that are recorded in labor force statistics.

From a policy perspective, the expectation that female patterns will come to resemble those of males should be resisted, in spite of similarities at the levels of highest education. Given the distinctive social, biological, and demographic trajectories of males and females through their life-course in Egypt, expected shifts in female labor force participation should be forecast on the basis of these different trajectories

and not modeled on the male pattern.

(4) The structural differences between male and female labor markets can be illustrated by specific trends among males with respect to education-employment linkages, in comparison with female trends discussed throughout this chapter (see also B.Vermeulen and G.Papanek 1982).

(i) Uneducated males (illiterate + read/write) are over-represented in the labor force in relation to their proportion in the population. In both Census years, they constitute the vast majority of the male labor force and of the entire labor force.

(ii) During the intercensal period, there has been a sharp decline in labor force participation by males with primary and adadeya ("less than Intermediate") education. Although precise comparisons are difficult because the 1960 Census included both groups in a single category, the decline appears to signal a growing propensity for males to continue their schooling, once they have entered primary school. It should be noted, however, that the low point in drop-out rates was reached in 1975 but has been rising since then (Section 5.6 below).

(iii) Among males, in sharp contrast with females, completing the Intermediate level of education does not constitute a major break in the propensity to enter employment.

To summarize, education-dependent employment for females but not for males is the predominant pattern in the Egyptian labor force as depicted by the 1976 Census. Although the share of highly educated males in the labor force has increased slightly between 1960 and 1976, there is not the extreme emphasis on highly educated workers that there is in the measured female labor force. The 11.8% of males with Intermediate education and above constituted 10.7% of the male labor force in 1976 (Table 5.2) in sharp contrast with the 5.2% of similarly educated females who made up 47.3%.

5.5 Education-Employment Linkages for Females

In Egyptian industry, as already noted, demand for women workers is poorly adjusted to the supply. Evidence of heavy overstaffing in service occupations increasingly entered by women (e.g. clerical work) also suggests maladjustments in non-industrial occupations. If female entrants into the labor force are channelled into precisely those occupations in which there are large excesses of workers, neither workers nor employers stand to benefit.

In view of the ample supply of labor in industry, employers have come to rely on a social institution that is not well designed for channelling women into paid employment, namely the system of formal education. These tendencies are further strengthened by government guarantees of employment for males and females who have successfully completed specified courses of study.

While the role of the educational system in preparing boys for paid work has long been recognized in Egypt, it has not necessarily had this role in the schooling of girls. This results from the historical development of education for women in Egypt and the ambiguous messages girls receive from their environment -- including the schools -- about their future social and economic roles.

It is well known that the educational policies of the Egyptian government are based on "the right of every citizen irrespective of sex to have access to free education at all stages according to the talents and abilities within the framework of equal opportunities" (Islahel-Sherbini, quoted in Smock and Youssef 1977). As a result of this policy and of the greatly increased educational budget in the early 1950's, there has been a substantial increase in the absolute numbers and proportions of women in the educational system at all levels. Education for children aged 6-12 has been made compulsory and drop-out rates have declined steeply since the 1950's, although there is evidence of recent

increases in drop-out rates from primary school for boys and girls (Section 5.6)

However, given the small size of the female labor force in Egypt which reflects the nation's underlying values concerning paid work for women and given the recency of rising female participation in education-dependent occupations, it is not surprising that the educational system is not well adjusted to meeting the needs of employers. In the past, most of the women who entered the labor force were precisely those least able to benefit from formal education.

Ambiguity is built into the system. Parents and teachers tell girls they hope they will not "have to work" although this too is beginning to change. This results in very inadequate preparation for the economic activities that at least some women will need to undertake, even if all do not. This is very different from the expectations surrounding boys throughout their school years -- they know that they will be expected to earn when they leave school and choose their courses accordingly. Yet girls are often encouraged to select those educational tracks that do not require early decisions about future work but leave the question of eventual employment somewhat uncertain. When women then do seek paid work, they are often in a poor competitive position in comparison with men and in comparison with women who have made early choices of future work. This is one of several factors that accounts for the "bunching" of women in dead-end occupations that tend to become identified as "women's jobs" and which are poorly articulated to the full hierarchy of positions within an organization or occupational range.

Ambiguous messages to women from the educational system are lacking only in those nations where political decisions have been made to draw maximum numbers of women into the regular labor force and where these decisions are then supported by wage-price policies that make it impossible for families to live on the earnings of only one worker. However, this is unlikely to be the path chosen by Egypt.

The ambiguity built into the system and the existing constraints on occupational choice reflected in worker and employer preferences, plus male-female average wage differentials, must all be assumed to affect decisions and risk-taking strategies of families deciding on educational investments for males and females. There is usually some question whether women will, in fact, "use" their education and who might benefit from their earning capacity when they marry. In groups where attitudes and values concerning female public participation are critical or mixed, additional risks may be perceived by families unwilling to incur the opposition of relatives, friends, and neighbors. On the other hand, in groups where educated women are valued regardless of possible employment benefits, incentives for female education may be unequivocal, especially if future marriages can be expected to be enhanced by educational achievements.

In short, families whose past history of educational involvement is not very strong may perceive few incentives and many disincentives for female educational investments under present Egyptian conditions -- except if their resources promise to be sufficient to support longer range educational plans lasting up to fifteen years. This would enable them to begin benefiting from government guarantees of employment. They already know that traditional female employment in occupations defined as "unskilled" do not depend on much formal schooling, if any. Occupations at the upper end of the scale are usually out of their reach, for reasons of class, status and income. But uncertainty exists about the middle ground, which is also where most change is likely to occur.

In societies faced by the "Egyptian dilemma" described at the outset, two levels of employment have typically been available to women, only one of which is linked to formal education. Highly educated women, often from upper and middle-class backgrounds, have entered professional and service occupations

often serving the needs of female clientele that could not or would not accept male professionals' services. These have often been the women whose courageous pioneering efforts helped to open educational pathways to Egyptian women, more recently including women from other class backgrounds.

At the other end of the scale of women's occupations are the jobs no one else wants and that census takers often do not even record. In all nations, women do much of the society's "dirty work" for very little pay -- sweeping roads, construction work, brick-making, latrine cleaning, domestic service, harvesting and transplanting, care of farm animals, and so on -- jobs that entail tough, repetitive manual labor and that tend to be considered demeaning. Because these jobs are intrinsically undesirable, even by the women who do the work, they are often displaced by technological innovations (bulldozers, flush toilets, washing machines, sickles, rice mills, tractors). Yet the new tools that replace these labor-intensive "women's jobs" are usually taken up by male workers and females find no substitutes.

In general, this pattern is highly bi-modal (or U-shaped) with low activity levels in the middle range, among women with moderate levels of education, living in families with moderate incomes. This pattern is characteristic of many, not all, developing nations. It shapes the expectations of families at different class and status levels with respect to the utility of female education for eventual employment or other activities consistent with family status and income. In many countries, as in Egypt, very rapid changes are occurring in the middle range, at the boundaries of existing high-activity levels. This explains, for example, the rapid increases in labor force participation among women with high-school (Intermediate) education between 1960 and 1976, even though levels among university-educated women declined slightly during this period (Tables 5.1 and 5.2).

According to this model, movement also occurs between the middle range of low activity and the lower end of the scale of occupational prestige

and pay. For example, the male-female educational differentials among production workers in the same occupation (Table 6.1) can be explained by the greater propensity of women with even low levels of education to seek regular jobs, if they need income, compared with totally uneducated women. They are somewhat more self-confident and employers are more likely to hire them. However, because women's occupational choices are more constrained than men's, they accept employment at levels that men with corresponding education would not seek. In industry, of course, there are also many male jobs requiring no education, such as carrying things to and from assembly lines. These jobs have no female equivalents, which also accounts for the educational differentials.

Downward movement from the middle range into high activity levels among uneducated women cannot be documented with currently available data, since this is most likely to mean increased activity in unrecorded employment. However, both on the basis of micro-data (cited elsewhere in the report) and on the predictions generated by this model of education-employment linkages, we would expect movement in both directions across the boundaries of existing high and low activity rates for females at both ends of the occupational and educational range.

In effect, the four sectors (educated males, educated females, uneducated males, uneducated females) constitute essentially separate labor markets, showing relatively little movement across the barriers of educational attainment and gender differences. At these barriers, movement may be easier downward (i.e. of women into the informal sector from regular employment) than in the other direction. Movement of educated women into middle and high-status occupations is also facilitated by women's educational attainments, which make it possible to enter occupations previously identified as male. Evidence from Chile, for example, identifies women's superior academic achievements in excellent schools as major elements in their labor force entry (Schiefelbein and Farrell 1980).

These distinctions may be obscured by the concepts and methods used in the analysis of labor force and employment. The terms "primary" and "secondary" workers (or "men" and "non-men") mask distinctions of both gender and age. The term "primary" worker is applied to all males aged 15-59, while "secondary" workers include female workers of all ages, children (6-14) of both sexes and older males (60 and over). Data presented in this form make it difficult to disaggregate findings according to somewhat different criteria. For example, demographic studies of other nations suggest that substantial proportions of women can expect to be primarily responsible for the support of children and other dependents, if differences in age at marriage are pronounced and if men die at somewhat earlier average ages than women (Buvinic and Youssef 1978). Perhaps as many as one-third of women, it is suggested for countries similar to Egypt, may expect to be primary earners at some point in their lives. However, if the term is used on the basis of age criteria, rather than functional ones, these distinctions are inaccessible to researchers and policy-makers. Since Egyptian society so clearly separates males and females in their social roles, it would be reasonable to take account of these distinctions in research.

Statistical organizations naturally reflect the concerns of policy-makers at any given point in time, although international customary usage cannot be overlooked. For example, the Egyptian Population Census shows highly detailed data breakdowns about extremely educated persons; breakdowns among educational levels differentiate even between varieties of advanced degrees. Yet the 1960 Census made no distinction between persons who had completed primary school and the adadeya certificate, even though this category contained nearly 300,000 persons in 1960. By 1976, this situation had been rectified, showing the readiness with which necessary changes can be carried out, if policy-makers require them.

In the next section, we illustrate the importance of relating female education, child labor, and the employment of adult females through a brief look at drop-out rates from primary school among girls.

5.6 Drop-outs from Primary School: Girls and Boys

A primary school education does make a difference in obtaining a job, even though the proportion of women in the labor force with only a primary school education is very small. Among production workers, in the same occupational group women are more likely than men to have a primary school education or the adadeya certificate (Table 6.1 , Chapter 6).

But many Egyptian boys and girls do not even enter primary school. Even among those who do, many never finish.

The scale of the problem is enormous. To illustrate, we have found that the total number of girls who dropped out of primary school, from among the 8 age cohorts now between 15 and 22 and perhaps entering the labor force for the first time, is about as large as the total measured female labor force in the 1976 Census.

Between 1966 and 1973, approximately 2.2 million girls entered the first grade of primary school. Only 1.5 million of them received the primary school certificate at the end of the sixth grade; 724,000 dropped out along the way. Many young girls in these age cohorts are now seeking ways to earn, given the economic pressures on their families. The employment future looks bleak for those who did not even finish primary school.

Young women now in the mid-teens to early twenties would have entered primary school, if at all, starting in the mid-1960's. The following compilation, using rounded numbers, illustrates what happened to the 8 age cohorts who entered primary school between 1966-67 and 1973-74. While the total numbers of drop-outs declined over this period, the proportion of drop-outs to total enrollments held fairly steady at about one-third (Saad 1980).

TABLE 5.4

Female Primary School Enrollments and Drop-Outs, 1966-67 to 1973-74

<u>Year entered</u>	<u>(Numbers Rounded)</u>		
	<u>Enrollments</u>	<u>Drop-outs</u>	<u>% drop-outs</u>
1966-67	257,000	111,000	43%
1967-68	257,000	96,000	38%
1968-69	272,000	92,000	34%
1969-70	285,000	89,000	31%
1970-71	295,000	88,000	30%
1971-72	286,000	87,000	30%
1972-73	289,000	83,000	29%
1973-74	233,000	77,000	33%

Source: Saad, Samir L., Drop-outs from Primary Education 1956-1979: A statistical study, National Research Center for Education, Cairo, March 1980 (Arabic).

For both boys and girls, drop-out rates from primary school have begun to rise again since 1975. Until then there had been an impressive decline from the late 1950's. In 1959-60, 52% of girls and 40% of boys dropped out of primary school before obtaining their certificates. These rates fell fairly regularly and reached their low points in 1975-76 at an impressive 3.2% for boys and 4.8% for girls (Saad 1980).

With few exceptions, drop-out rates for girls remained noticeably higher than those for boys throughout the primary grades in the mid to late 1970's. The high point, in terms of dropping out, is reached for both boys and girls in the fifth grade (12.2% of boys and 13.8% of girls in 1978-79). Examinations become more difficult in the fourth grade, apparently discouraging many children and parents. But once a child makes it through the fifth grade,

chances are good -- especially for girls -- that primary school will be completed.

The 10-12 year olds who drop out of the fifth and sixth grade may well be entering paid employment, especially if they are boys. Private sector firms and small workshops often employ young boys to assist older production workers with such tasks as carrying materials, holding tools, etc. Not all of these "assistant" jobs lead to the acquisition of marketable skills. While some of the boys we observed during our factory visits looked young enough to be below 12, managers insisted that they were over 14 and were being paid as regular apprentices. Many had fathers at the same plant.

Studies are in progress to follow drop-outs as they enter the labor force and no results are yet available. It may be that opportunities for employment are expanding for under-age boys, creating a pull away from school. At the same time, the rising real costs of education caused by the prevalence of a private tutoring system are creating push-factors out of education for poorer families. As some manual jobs are increasingly perceived to offer higher wages than government clerical jobs, this will reinforce new family strategies that favor child apprenticeships over continued schooling.

These factors may all play an important role in the school-leaving decisions of poorer families. What has been neglected in discussions of this problem in Egypt to date, however, has been the link between the employment of adult women and children's drop-out rates.

When poor families need additional income, they will encourage children to earn, as long as adult members cannot earn enough. Increasing adult women's access to jobs in the organized sector, at better wages than they can get in the informal sector and under more regular conditions, can be a significant factor in counteracting the movement of children into paid employment.

5.7 Summary

Linkages between employment and education are useful conceptual tools for understanding differences among men, women, and children in the Egyptian labor force and wider society.

Egypt's dilemma concerning women's social and economic roles results from the different and contradictory developments of recent decades that have also affected other developing nations: rapid increases in female educational and labor force participation at higher class or status levels and declining employment participation at lower levels, with slow increases in educational attainment. Each of these contradictory developments has a distinct set of causes and calls for quite different policy conclusions.

Confusing the two trends, as in arguing that "Egypt's working women are becoming more educated," obscures what is happening and makes it harder to avoid adverse effects on some population sectors. In fact, different cohorts of females are entering employment with different educational attainments; economically active women from groups long a part of the labor force are no longer enumerated. On the basis of present data, it is impossible to tell to what extent these results represent the reality or are statistical artefacts.

From a policy perspective, the crucial link between these two contradictory developments is the extent to which formal education for women can and should be the pathway to regular employment. Education for women, as a human right and as a socially desirable development is crucial. The question is whether formal educational certification should be the major determinant of access to employment.

Since middle and upper class families are most likely to invest sufficient resources in the education of their daughters to qualify them for "education-dependent" employment, they are also most concerned with maintaining a strong linkage between formal education and regular employment. Poor families, who

cannot afford the direct and indirect costs of lengthy educational preparation for female employment, need alternative routes to retain access to employment if worsening income inequalities are to be avoided.

Census figures document a dramatic decline in the labor force participation of uneducated women but not uneducated men (p.110 and Tables 5.1,5.2). Convincing explanations are difficult, on the basis of currently available data.

Census figures also show that a very small proportion of the female population (the 5.2% who have high school education or better) comprised nearly half the measured female labor force in 1976 (47.3%). This is the counterpart of the declining participation of uneducated women. The distortion is not found among males.

The clearest observable change in labor force participation between 1960 and 1976 occurred among women with high school educations, 38% of whom were counted in the measured labor force in 1976.

In our analysis of education-employment linkages among females in Egypt, we have argued that schools provide ambiguous preparation for girls in employment. Parents and teachers tell girls they hope they will not "have to work" while asking them to prepare for possible future careers. Although all citizens, regardless of gender, have the right to an education, most Egyptian females look forward to using their education differently from most males.

Many changes are occurring in the middle range of the educational and income distribution. The distribution of females in the labor force, according to educational preparation and/or family income, tends to be bi-modal (or U-shaped) in many nations, including Egypt. Poor and poorly educated women work because they need the income; highly educated women, often from higher status or income groups, work in professions that utilize their talents and their desire to serve their society.

Educated males, educated females, uneducated males and uneducated females essentially constitute four separate labor markets because both educational attainments and gender constrain occupational choices. In Egypt, as in other nations with strong segregation between women and men in many aspects of social life, tendencies are strong toward well-defined "women's jobs" and "men's jobs" at different educational levels. While movement across gender barriers is increasingly possible, educational qualifications sharply limit employment access. Among females, in view of an ample supply of female labor, the use of educational certificates is increasing as a method to choose among applicants.

This limits the employment chances of less educated females and makes it increasingly important to develop vocational training programs, preferably located within industry rather than the educational system (Chapter 6).

The employment of adult women is also closely related to the education and employment of children. We cite evidence (Section 5.6) of rises in the drop-out rates of girls and boys from primary schools and argue that increasing the employment opportunities for adult females could bring down rising trends of early labor force involvement of children.

CHAPTER 6: VOCATIONAL TRAINING FOR WOMEN IN INDUSTRY

6.1 The Special Need for Training in a Time of Transition

Good vocational training programs for women in industry can help resolve the two major dilemmas hindering the full utilization of available female labor supply to increase industrial productivity.

First, as we have shown, the supply of female labor to industry exceeds the demand in both public and private sectors. This imbalance could be remedied to some extent, provided industrial managers and government planners utilize the expansion of vocational training facilities for this purpose. The following reasons should be considered: (i) the expansion of vocational training may present managers with the opportunity to reassess their need for female workers; and (ii) training programs can be useful in channelling female workers into skill areas where the need for workers is greatest. Both of these opportunities can affect the demand for female labor and also influence the quality of the supply.

Second, we have argued that an exclusive emphasis on formal educational qualifications for women workers is a serious disadvantage for the less educated classes, especially if women are displaced from jobs that have been open to them in the past. It is not easy to affect many of the situations responsible for low educational levels among women, such as poverty and age. Vocational training programs, especially if they include skill upgrading programs for older workers, can fill this gap. The provision of vocational training to less educated females to prepare them for work in industry can be a major tool in preventing a worsening of income distribution as a result of the displacement of women from the labor force.

For both of these reasons, the highest priority should be given to training programs that equip women workers to perform productively in Egypt's expanding industrial sector.

For a variety of reasons, we consider that the situation favors the establishment of training programs based in industrial enterprises and conducted on the shop floor, utilizing existing skills of experienced male and female workers to teach new entrants to the plant. The case study of the Cairo woodworking factory, presented in detail in Section 6.5, documents the highly successful use of this approach in a smaller enterprise.

The most important reason for favoring in-plant training programs is time. Shortages of skilled male workers are keenly felt at the present time and managers are seeking remedies in a hurry. Industry-based training programs can be more practical, more closely oriented to the immediate needs of an industry, and more economically run than courses based in educational institutions.

Cost is a second consideration. Vocational training courses conducted in the educational system must meet the considerable overhead of a complex system, parts of which suffer from overstaffing and parts of which show evidence of very high teacher turnover. Plant-based training programs can be designed to be more cost-effective without any sacrifice of quality, even if they lack some of the more theoretical preparation offered in the school system.

Attitudes are a third factor. Many of the women seeking work in industry come from class backgrounds where female education has not been emphasized in the past. Although formal schooling may be held in very high esteem, in the abstract, many potential workers may lack the self-confidence to attempt training programs based in the educational system because the system has remained foreign territory to this group. A training program linked to the workplace, on the other hand, does not require adjustment to an essentially alien situation in which workers may feel out of place. Worker self-confidence may increase as the result of the training, however, so that later skill upgrading courses can be attempted in a different environment.

The composition of the labor supply at the present time also favors the development of vocational training programs primarily based on practical training in industrial enterprises. Changes in the composition of the female labor force in the last two decades show increased participation levels among more educated women and declining participation among the less educated. We have argued that these developments are unfavorable to the poorer sectors of the population. Since women from these poorer sectors generally continue to be under pressure to earn additional income, it can be expected that they are working in a variety of irregular occupations, not covered by labor legislation and not captured by labor force statistics.

It is these women who may represent the most important and also the most neglected source of highly productive female labor to industry in Egypt. With appropriate practical training, these workers could greatly enhance Egypt's human resource endowment. Bringing these workers into jobs where they can also benefit from the advantages offered by Egyptian labor legislation, such as social benefits, pensions, and equal wages with men, would provide an important improvement in income distribution.

In short, vocational training for less educated women who desire industrial employment has a two-fold significance: (i) providing capable workers for industries facing skill shortages and (ii) providing employment for a sector of the population that appears to be facing problems in finding regular employment in the formal sector of the economy and thereby improving income distribution.

6.2 Education of female production workers

In the past, no educational credentials were needed for women to enter production work. Coming from families in economic need and often helped by relatives to find jobs in the factory where they worked, women might learn to read and write after they started to work, in adult education classes at the factory under the mahw-al-omiya (eradication of illiteracy) program (Hammam 1980).

But as already indicated in Chapter 2 (Table 2.3), some public sector enterprises now require applicants for production jobs to have the adadeya certificate (9 years of schooling). This is a significant new step. As shown in Table 6.1, the overwhelming majority of male and female production workers have had very little, if any, formal education in those occupations where many women are employed. Yet the general trend is unmistakable: more of the female production workers have been to school than the men with whom they work.

Three factors may explain this somewhat anomalous finding, considering that so many more men than women in Egypt have been to school and considering also that only 43% of males but 73% of females were illiterate in 1976 (Table 5.2)

(i) Women tend to work on production lines. While many men may be supervisors, there are also many who do heavy, unskilled work, such as carrying tools and supplies to and from the lines.

(ii) Basic education may provide the necessary impetus for women from very traditional backgrounds to become innovators and seek new kinds of work.

(iii) Managers have more women to choose from and can use educational requirements to select among applicants,

In general, women are also less mobile geographically than men. Family life is structured in such a way that adult males can be absent for much longer periods of the day (or the year) than adult females. Far fewer categories

TABLE 6.1

Educational Attainments of Male and Female
Production Workers in Selected Occupational Categories

<u>Education</u>	1976							
	Administrators, ^a prod. supervisors		Labor Chemicals		Labor Spinning, Weaving		Labor Sewing, Tailoring	
	F	M	F	M	F	M	F	M
Illiterate	9%	12%	16%	43%	40%	37%	53%	42%
Read/write	21	41	24	48	49	58	35	52
Primary (6yrs)	15	10	37	5	19	8	8	5
<u>Adadeya</u> (9yrs)	20	6	23	4	10	5	3	1
Intermediate	31	29	--	--	--	--	--	--
Above Inter.	2	2	--	--	--	--	--	--
Totals	100	100	100	100	100	100	100	100

Source: Population Census 1976, CAPMAS, Table 22

^a: A category included among production workers, not administrators and supervisors in general.

NOTE: 1976 Census tables do not show any production worker in any occupational group whose schooling has gone beyond the adadeya certificate level, except among administrators and production supervisors, about 30% of whom have been to high school. The Census may be in error on this point: field interviews with women workers showed at least some production workers to have had high school educations (Ibrahim 1980).

of employment are defined as appropriate for women. As women's employment options are more restricted, women with primary and adadeya certificates consider taking industrial production jobs that an earlier generation with similar education would have rejected. Managers thus have increasing opportunities to choose among female applicants with some education, and between them and less educated males.

This trend has accelerated in recent years. We would argue that higher educational attainments among female production workers than males did not, in the past, necessarily point to an excess supply of female workers but could be explained by the factors already mentioned. Now that production work is being increasingly accepted, however, rising educational requirements for female applicants do point in this direction.

Higher educational certification requirements are also made necessary in some industries by the nature of the work. Employment planners in Egypt point with pride to the pharmaceutical and electronics industries as examples of high concentrations of female workers in industry. Both require the preparatory diploma. At least some of the operations that women production workers perform in these industries do require formal education. Others, such as packaging and bottling, may not.

It would be important to distinguish among the operations that require certification and those that do not, in these and other Egyptian industries. The legitimate goal of upgrading production standards with a better educated workforce should not lead to elimination of those production jobs where less educated workers can perform well. Policies for employment and training will need to be well coordinated in order to avoid unnecessary displacements, which appear to be taking place.

6.3 Vocational Training in Egypt today

It is obvious that managers and planners in Egypt today are largely aware of the central importance of good training programs for upgrading the productivity of the labor force. The need for a closer fit between the requirements of employers and vocational training programs is beginning to be discussed. Pressure is being exerted to shorten the length of many training courses, both because of shortages in some skill areas and because trainees tend to drop out of long courses to find attractive employment elsewhere (Symposium on Training, 20 January 1982, Cairo).

The stage appears to be set for a reevaluation of the need for vocational training programs for women in industry. At the present time, there are barriers to the fuller participation of women in each of the three existing areas of training.

Three basic types of training are offered in industry:

- (1) Industrial high schools offer a 3 year program of theoretical and practical training in a variety of skills, followed by guaranteed job placement.
- (2) Training centers, run by the Ministry of Industry, provide general and specialized training, also for 3 years. These are organized by industrial sector, i.e. textiles centers, chemicals centers, etc.
- (3) Industrial enterprises themselves provide short courses or on-the-job training for their employees, according to the needs of the firm, sometimes with assistance from the Ministry of Manpower and Training.

In order to pinpoint the location of the barriers to fuller female participation, it is important to examine the recruitment process, the nature of educational qualifications required, and the relevance of specific skills to the job for which an applicant is being hired. Interventions that could improve training and hiring opportunities for women workers could then be designed on the basis of this information.

In theory, vocational high schools are open to girls as well as boys. In actual fact, female enrollment is low. Student bodies are largely male, the instructional staff is overwhelmingly male, and the curriculum is weighted toward skills defined as being appropriate for males. Young girls understandably prefer the atmosphere created by a more balanced sex ratio in the commercial secondary schools and look forward to "suitable" employment in occupations that the society defines as appropriate for females.

Since both types of vocational institutions are covered by government employment guarantees (in addition to agricultural institutes, but excluding academic secondary schools), reasons for low female enrollments must be sought in the cultural and social pressures that so strongly affect educational and occupational choices.

The numbers of female graduates of technical institutes are very small in comparison with the commercial schools, the extent of the difference being shown in this compilation:

	<u>Female graduates</u>	
	<u>Technical Institutes</u>	<u>Commercial Institutes</u>
1976-77	129	2,425
1977-78	292	2,478
1978-79	194	3,308

As is well known, white collar jobs have held higher status for girls in the past than production jobs in industry. While this is still largely true today, commercial school graduates face poor job prospects. Overstaffing in institutions requiring clerical workers is increasingly been seen as a major problem in Egypt's productivity (ILO 1981). These problems may make the industrial certificate more attractive for young women. Higher salaries and production bonuses have also recently improved the perceived status of manual and industrial jobs more generally.

These factors combine to create favorable conditions to increase female enrollment in the industrial high schools at the present time. The obstacles presented by the present composition of the student body, however, will need the most careful educational planning to overcome. As shown in Table 6.2 below, the ratio of male to female students in the technical schools is almost overwhelming: nearly 15 boys to 1 girl among students in 1978-79. In the commercial schools, by contrast, there were not quite twice as many boys than girls: 1.9 boys to 1 girl in 1978-79.

TABLE 6.2

Male/Female Ratios Among Students and Graduates in Egyptian
Technical and Commercial Secondary Schools

<u>Years</u>	<u>Technical Schools</u>		<u>Commercial Schools</u>	
	<u>Enrolled</u>	<u>Graduates</u>	<u>Enrolled</u>	<u>Graduates</u>
	M/F	M/F	M/F	M/F
1976-77	17.3	20.1	1.8	1.1
1977-78	15.1	10.3	1.8	1.2
1978-79	14.5	13.4	1.9	1.6

Source: Statistical Yearbook A.R.E. 1980, pp.186-187

However, girls are more likely than boys to complete the course, in both technical and commercial institutions, as shown by the somewhat lower Male/Female ratios among graduates as compared with those enrolled in any particular year. This presumably indicates fewer competing opportunities for employment for females during the course of their training and, quite possibly, their perceived need to get all the credentials they can, in order to compete more effectively for jobs with other women and with men.

Completion rates (calculated on the basis of the ratio of graduates to the total enrollment of the preceding year) for the same three years shown in Table 6.2 also indicate that larger proportions of female than of male students complete the course in both technical and commercial schools. As shown in the compilation below, nearly half of the female enrollment (48.8%) completed the technical course in 1977-78 as compared with less than a third (29%) of male students.

TABLE 6.3

Completion ratios of male and female students in technical and commercial institutes
(Ratio of graduates to total enrollment of preceding year)

	<u>Technical</u>		<u>Commercial</u>	
	Males	Females	Males	Females
1976-77	28.7%	35.0%	20.6%	33.2%
1977-78	29.0%	48.8%	23.5%	33.2%
1978-79	27.8%	31.6%	31.4%	34.4%

Source: Statistical Yearbook A.R.E. 1980, pp.186-187

In view of the small number of female technical graduates, apprenticeship programs could fill a real need. But in 1979, there was not a single female among the 15,000 students enrolled in the apprenticeship programs sponsored by the Ministry of Industries (Rugh 1979).

But even more generally, factors of labor supply and demand combine to create favorable conditions to increase female enrollment in the industrial high schools at the present time. The trend toward more female participation

could be stimulated by giving wider publicity to the job opportunities open to female graduates of these schools. Even more important, efforts to increase the numbers of female teachers in these schools would go a long way toward defining industrial secondary schools as acceptable environments for female students. Recruitment of more female staff, appropriately skilled and trained in teaching methods, could also improve the quality and stability of the teaching corps, which currently suffers from the high turnover rates of male instructors.

The Ministry of Industry administers a training program that parallels the vocational high schools. These centers have an annual enrollment of 8,000 students. Until late 1981, these training courses were exclusively for males, even in centers serving industries employing substantial numbers of women workers, such as electronics, food and textiles. In late 1981, the first Ministry training program for female recruits was initiated for 60 girls in the electronics field. Significantly, this was in response to shortage of male trainees and high turnover among those who had entered the program. Two small classes are currently conducted for girls in electrical circuitry in Tourah and Tanta. In both cases, the trainees are first hired by a factory and then sent to the training center for one year of theoretical instruction followed by two years of on-the-job training.

The Ministry's policy has been to respond to preferences of factory management and the forces of tradition. In other words, they neither encourage or discourage female access to training explicitly, but in actual fact all-male programs have been favored. Depending on the success of the two pilot projects, girls may be recruited for training in two new garment industry centers now being planned. However, as long as trainees are initially recruited by individual enterprises before being sent to the training centers, women's

access to this type of training will continue to be determined by the willingness of managers to hire them. This depends on their perceptions of the costs and benefits of employing more women workers.

A third significant category of industrial training includes the training that takes place in individual factories. More formalized programs are conducted with the assistance of the Ministry of Manpower and Training. The services of this Ministry include technical advice, payment of teachers' salaries, materials costs and per diem payments to trainees.

The great bulk of in-house training, however, takes place informally on the shop floor. The new recruit learns at the side of an experienced worker. New workers are often rotated among several tasks until they become familiar with department routines, before being placed in a more permanent task.

In this connection, managers and educators may wish to pay special attention to the innovative program outlined in our Recommendations for a "job-sharing" program between a married woman worker and a teenage girl during the period that children are out of school. This program, conceptualized on the traditional "mother-daughter" learning model, provides an initial period of training for the young worker at the side of the older one and solves a vexing problem of child care for the mothers of school-age children. It also provides an initial training period for young women that would be impossible under present conditions of employment.

Although the organizational problems of introducing this innovation may seem complex, job-sharing programs are being developed in a number of countries. For the most part, these programs have devised sharing arrangements between two adult workers, such as two women working part-time, or both members of a married couple wishing to share child-care responsibilities for a short period. None, so far as we know, have introduced the "mother-daughter" model which could be a distinctively Egyptian solution to a growing dilemma.

With regard to the success of in-house industrial training programs in improving women's job access, it is hard to draw general conclusions, because programs are so variable. On the basis of interviews in ten public enterprises, however, the following observations can be offered. The more formalized training programs appear to be flexible enough to be reoriented quickly toward increased female recruitment, once shortages of male workers or high male turnover rates are seen as a problem. Even at the relatively low per diem rate of LE 1.00 (late 1981), none of the factories reported any difficulties in recruiting girls for training. Given this surplus, factories prefer to recruit girls directly from adjoining neighborhoods instead of relying on trainees sent from the Ministry of Manpower, since not all of these trainees are seriously seeking work.

Female access to many training courses is limited by the nature of the work itself. Since women are restricted or prohibited to take night work, they cannot get jobs in industries involving continuous processes (kilns, blast furnaces, food and chemical processing) since they are usually organized into rotating shifts. Under present conditions, these jobs are effectively closed to women.

In the few reported cases where on-the-job training seemed to be unsuccessful, complex and delicate machinery was usually involved. For example, fresh recruits without previous production experience (though perhaps with some formal training) were put on weaving looms or other apparatus where mistakes could be costly. Managers reported that "girls ruined the machines" and abandoned the training effort. If these failures in fact occurred, many factors could have been responsible. When women are introduced into new skill areas, it is absolutely crucial to assess their aptitudes carefully. The practice of recruiting inexperienced workers should be reconsidered in favor of using experienced women workers who have already proved their

abilities on production machinery.

Unfortunately, however, there is little evidence of skill training or retraining for long-term, experienced workers. Women workers themselves often reinforce this practice by their preference to remain in a familiar job rather than volunteering for additional training. There is the possibility that additional training may impose an additional time burden on women who have already worked out a precarious balance between their family responsibilities and their paid employment. Cultural factors may also be involved, such as the pressures on women to conform, to hang back, and not to be the first to try something new.

Our factory visits show, however, that women often excel when they enter previously all-male skill areas. At a Shubra textile plant, for instance, women had only recently been trained on weaving looms. Managers reported, however, that one of these women had won the award for "best weaver" for both quality and amount of production in 1981. These successes indicate a pressing need to identify those programs in which the introduction of women has been accomplished successfully, so that the elements of their success can be incorporated in other programs.

6.4 Vocational training programs for women in the European Community

A detailed review of vocational training programs for women in the European Community was recently conducted by a West German organization, CEDEFOP (Pierret 1982). The review found the following points to be vital to the success of training programs in improving women's position in the labor market:

(i) Solutions had to be sought for specific problems rather than motivated by a vague desire for some improvement.

(ii) The success of training programs was enhanced by specific external factors, such as special financing arrangements, scientific follow-up of

the program, special arrangements to provide financial compensation for trainees.

(iii) Concrete advantages to trainees after completion of the program improved its chances of success; this includes salary increases, training course diplomas, specific changes in work responsibilities, a new recognized occupational status.

(iv) The training sequence had to be tailored to fit the needs of the trainers and to suit the specific problem to be solved.

(v) Successful programs required the cooperation of employers at all stages of the training, as well as the cooperation of trade unions or work councils.

(vi) The program had to recognize the special needs of trainees, most particularly with respect to the organization and management of the work.

In addition, the European Community study also indicated some of the indirect benefits that training programs can provide for employers and workers. It was found, for instance, that training programs often strengthened the bond between employers and workers. Women became more self-confident as a result of their training; this strengthened their commitment to the firm. More self-confident workers also provide greater opportunity for managers to experiment with their placement in non-traditional jobs, which increases management options.

Training programs also provided an opportunity for employers to give more thought to the existing "fit" between the requirements of a particular job and the skills of workers. In effect, an employer can use the opportunity provided by the training program to achieve some reorganization at a time of transition, for example with respect to hiring and promotion practices that may not meet the requirements of a changing labor supply.

In the European Community firms, the training programs for women also presented an opportunity for some firms to change their image and to attract very favorable public attention.

The firms also exhibited familiar problems. It was clear that training did not automatically entail promotion. But the report of the CEDEFOP team concluded that some of the benefits of the training program are lost if they are not accompanied by adjustments in the hiring or promotion practices of the firm.

In most instances, training programs for women were not accompanied by the necessary social support programs. This lack contributed to continued problems for women workers even after the training was completed. If women were not assisted in meeting their family responsibilities (as with child care centers), training programs were often an additional burden that they could not carry. For this reason, the evaluation team of the European Community programs strongly recommended that training programs should take place during working hours and in a place easily accessible to workers.

Training programs were also found to be more successful if they offered a system of continuous assessment during the training and did not rely only on one final examination at the end of the course.

In planning vocational training programs for women, especially in non-traditional occupations, it is crucial to pay special attention to the social and cultural factors of a particular environment. For example, in the European study it was found that one-third of young female trainees were unable to overcome conflicts between the negative attitudes of others and their own desire for non-traditional employment. These trainees did not finish the course.

As applied to the Egyptian case, this finding suggests the special importance of the class backgrounds of workers and potential workers.

For example, as found in a field study of workers in public sector industries (Ibrahim 1980), twenty years ago women workers faced strong and frequent criticism from neighbors and relatives when they first took a job in industry. Younger, more recent recruits to the industrial workforce, however, had faced very little such criticism. This supports the special importance that managers and planners should give to drawing workers from those sectors of the population where industrial work for women has already gained wide acceptance rather than from sectors where this opposition is still strong. Workers from backgrounds where their occupational choice is bound to be heavily criticized may encounter more problems in the workplace than others who have the support and approval of relatives, neighbors and friends.

In the European Community study, an important recommendation was made to emphasize concrete action "upstream of training." This is particularly important for Egypt. In other words, resources should not be allocated exclusively to training courses but also to the training of those who will be conducting the courses.

In Egypt, there is little previous experience in training women for industrial work, as already indicated in our review of available programs. Persons who have the experience of conducting vocational training for male industrial workers may need special additional training to equip them to deal successfully with the special needs of women workers. Managers who are serious about integrating more women into their workforce, and doing so successfully, may find themselves frustrated in their efforts unless the trainers themselves (whether in courses or on the shop floor) can communicate a sense of self-confidence and capacity to their trainees. Nothing can be more discouraging to a group of trainees than a trainer who communicates through verbal and non-verbal signals that women are inferior and that their success is dubious. But a trainer who is enthusiastic about the possibilities

of training women for non-traditional occupations and who recognizes that the success of these programs is vital to the nation's industrial development will greatly enhance the possibilities of succeeding in training productive workers. The evidence of such a successful program is presented in the case study that follows.

6.5 Women Workers Enter Traditional Male Work: The Cooperative Society for Wood Production, Cairo

Objections are frequently raised to a policy of female employment generation in societies like Egypt. Resistance is presumed to exist among both women and employers to any change in the traditional division of appropriate jobs among men and women. We have suggested in our report that rapidly shifting economic and social conditions in Egypt have dramatically lowered the cultural barriers segregating male and female work roles.

Still, long-held convictions are often slower to change than objective conditions. Those closest to the day-to-day problems of finding work or recruiting stable workers are sometimes quickest to adjust their attitudes and behavior. There is a value, then, in closely examining the accommodations made by individual industrial employers and their workers to labor market conditions in Egypt today.

The case of the Cooperative Society for Wood Production shows that women can be introduced into previously all-male job categories and work sites with a minimum of cultural strain. By analyzing key elements in the success of this project we can begin to identify the necessary preconditions for expanding women's access to training and jobs.

Problems with Male Labor

Since 1966, the Cooperative has trained and employed men in

furniture making and wood finishing in Darb El Ahmar, one of Cairo's oldest districts. In 1976 the total of teenage apprentices and adult workers was 250, but by 1979 the attrition to private shops and out-migration had reduced that number to 150. Managers could not recruit trainees nor keep experienced workers. Absenteeism was as high as 35%.

Initiative to Employ Women

It was only the severity of their labor problems which led managers to consider recruiting girls, since wood working in Egypt has been an exclusively male craft. Many workers and some supervisors were initially skeptical about the ability of females to operate machinery and handle heavy wooden units. Others thought that young girls would be reluctant to enter an all-male work environment. However, the production manager and director of training were in agreement that these obstacles could be overcome. They won approval from their governmental supervisory agency (HIPCO) for a trial program to train 50 girls.

Recruitment and Training

A woman with long experience in record-keeping for the Cooperative was made mushrifa (supervisor) for women, to deal with personnel matters. Training was to be entirely on-the-job, as with male recruits. Girls in pairs were assigned to an experienced worker to observe and practice a particular skill.

Newspaper advertisements specified girls above the age of 15, regardless of educational attainment. The only job requirements were a willingness to work hard for an attractive salary. More than a

hundred girls were interviewed in the first few days; many more continued to come after the positions had been filled.

Characteristics of Female Recruits

The educational profile of the original cohort tell a great deal about current labor market conditions. Approximately 15% had a high school diploma or its equivalent. White collar jobs traditionally held far higher social prestige than crafts and other forms of manual work. When asked why they opted for carpentry training, these girls mentioned the three year wait for a government appointment (for which some of them were eligible), the lower salary and lack of advancement opportunities in the Egyptian bureaucracy. They also expressed a preference for productive work in congenial surroundings. It is a measure of their commitment to their job at the Cooperative that some of these girls spend more than two hours on public transportation each day to come to work.

The 50 girls hired were all single and between the ages of 15 and 20. (Some have subsequently married.) A majority were graduates of primary school (6 years) but had not reached the secondary certificate. Some had failed promotion exams or left school for financial reasons.

A small number of recruits had less than primary education. When asked, managers said that education level had relatively little to do with ability to learn or work performance. In fact, girls with least education were among the most highly motivated workers. They felt extremely fortunate to have found well-paying jobs without any educational certification.

Wage Policy

It is the policy of the cooperative to pay workers based on their productivity and level of experience. This differs from public sector industry and government employment where starting salaries and promotion ladders are geared to educational certification levels. Managers feel that their policy creates an egalitarian atmosphere which emphasizes performance.

Starting wages are L.E. 25 per month with piece work payment that may total L.E. 6 to 10 per week. Thus the monthly wages of recent recruits range from L.E. 50 to 65. (By way of comparison, young boy apprentices under the age of 15 are paid from L.E. 9 to 20 monthly.)

At these wages, the attrition of female trainees has been extremely low. In the two years since recruitment, 2 out of the original 50 have left for marriage and 4 more to continue their studies. At similar wage levels, male turnover has been as high as 40% according to the production manager. The explanation given is that, once trained, men find more lucrative jobs in private shops or abroad. Female workers remain because of a preference for the protected work environment of the cooperative. There is no precedent for young girls to work in private workshops, where they would presumably be more vulnerable to male employers and fellow workers. However, the manager who initiated the female training program predicts that those barriers may soon come down and he may then be faced with a problem of female attrition. He cannot foresee labor migration becoming a significant phenomenon for Egyptian women at lower skill levels.

Work Organization

Based on the early success of his program the manager is currently recruiting more females and plans to increase the proportion of women on his payroll. A total of 80 women are currently employed.

As work is organized within the cooperative, women work alongside men in every phase of operation. Since the plant is located in an old Turkish mansion, some men and women are working in rooms isolated from the rest by stair ways and passages. This apparently presents few problems of propriety. Girls feel it would be more compromising if they worked exposed to the public (as in a store front shop) or in a very small enterprise.

The male craftsmen involved in training female workers were generally positive about their abilities. Girls were said to be easier to train than boys because they pay attention to detail. They are less likely to "play" when not closely supervised. They accept orders and instruction more willingly. The one process in which women are not currently training is in assembly of large items of cabinetry. This job is thought to be "too heavy" and liable to build up muscles. However, girls were observed lifting and carrying large pieces of lumber in other departments.

Absenteeism

Until recently absenteeism was a serious problem for the cooperative. Male rates were higher than those for females. To combat the problem, management instituted a policy of paying a 6 day bonus to any worker with no absences in a month. Absenteeism has fallen off dramatically. Managers finance the bonuses out of increased productivity.

6.6 Implications for Employment Policy Drawn from Case Study

The experiences of this establishment in introducing female workers suggest several recommendations for consideration in a broader strategy of female labor replacement:

- (1) It is probably essential that early programs for recruitment and training involve leadership favorable to female employment and committed to the success of the program. Where only men have previously been involved as supervisors, extra effort will be necessary to train and promote female supervisors.
- (2) Female trainees should be recruited without regard to educational attainment if it is irrelevant to task performance. Poorly educated women are disadvantaged in most current hiring practices, yet they have proved themselves highly motivated and productive workers. Breaking the bureaucratic links between certification and wages, especially at the level of production work, may enable a more appropriate focus on productivity for both male and female workers.
- (3) When selecting areas for introduction of females, those requiring manual dexterity and attention to detail have a proven record of success. Potential fields that are currently predominantly male include printing and typesetting, all types of traditional Khan Khalili Crafts, electrical/mechanical maintenance and repair, optical production.
- (4) Women should be recruited in sufficiently large numbers and placed in work settings of sufficient scale to provide the protection and sense of security necessary during a period of

shifting social mores about relations between the sexes.

Accumulating evidence points to smooth work relations among men and women when those conditions are met. Complete segregation of women workers does not appear to be necessary or desirable based on experiences in urban work settings.

- (5) Successful examples of female entry into new job areas should be documented and the management experiences disseminated to industrial managers. Newspaper advertising of training programs is a way of raising public awareness of opportunities available to women, as well as reaching potential recruits. A television series on unusual work careers for women could be made both entertaining and informative. Young girls making job and educational choices need more information and encouragement to apply for technical and vocational training in non-traditional areas.
- (6) A system of on-the-job training which enables women to begin learning immediately has advantages over formal training programs, as they are currently organized. Some of these programs are in theory open to women, but many more are restricted to men. It may be easier to convince managers with current labor problems of the utility of training women in-plant, than to overhaul existing training programs. In the long run, of course, both are necessary.

CHAPTER 7 : CHILD CARE, MATERNITY LEAVES AND COSTS OF FEMALE LABOR

7.1 Do Women Workers Cost More?

The cost differences between male and female labor are key issues for managers and policy-makers concerned with industrial productivity and problems created by a declining and unstable male labor force. If women's employment in industry is to be increased, in the interests of stability, productivity, and income distribution, presumed cost differences must be accurately assessed.

Furthermore, if employers are to be encouraged to increase their female workforce, this must be accomplished in such a way that the costs now carried by employers for social services provided for women and their children do not have the effect of discouraging them from hiring women workers. Current Egyptian practice places most of the financial burdens of child care on employers although workers themselves also meet some of the costs. Since the health and well-being of children has long been seen as a societal rather than individual responsibility in Egypt, the way is clear -- from the point of view of public feelings -- for the Government to assume a greater share of the burden of child care costs. In fact, the provision of quality child care could well be seen as a major opportunity for positive social intervention in the fields of health, nutrition, education, and family planning.

A 1981 amendment to the labor law directs employers (public and private sector) of more than fifty women workers to provide day care facilities at the workplace; the amendment does not apply to government agencies. Employers may give women workers subsidies for public day care centers near their place of residence if they cannot bring their children with them because of transportation or work conditions.

The experience of nations with high levels of female labor force participation suggests that quality day care for preschool children is the key element in maintaining high labor productivity for women. Egypt has little experience with situations where a very large proportion of workers are female, since its overall rate of measured female labor force participation is so low. Yet under current circumstances of high rates of male migration, it is realistic to plan for positive social interventions to assure high productivity along with essential support services for the women workers needed to fill the gap.

In spite of existing measures to assure these social services, or perhaps because of them, employers tend to view married women workers as liabilities rather than assets. Typically, the manager of a food processing plant told us "our single girls are among our best workers but once they marry and begin having children, it's one problem after another." But these sentiments are far from universal. Where services such as transportation and good child care are available to women workers who need them, female productivity equals or exceeds that of men. For example, in both the textile and electronics sectors, which are large employers of women, managers in Cairo reported in 1980 that the rates of male absenteeism and lateness due to second jobs had exceeded those of married female workers.

In Egypt, as elsewhere, attitudes about female employment are colored by a certain amount of feeling as well as fact. This situation is complicated by the tendency of women workers to feel very burdened by concomitant family responsibilities and to discuss them a good deal with others at the plant without, however, allowing them to affect their work performance as much as one might assume from their complaints. Second, many managers lack an accurate assessment of actual rates of

absenteeism, lateness, and productivity for males, unmarried females and married women (with and without children). Their perceptions may be influenced by the norms shared by the socioeconomic class to which managers belong, even if these are different from those of workers. In short, it is particularly important to develop methods for assessing the actual cost differentials among male and female workers.

7.2 Estimating the costs of a female workforce

Industrial employers need to be able to calculate the realistic costs of hiring female workers and to balance them against current costs of hiring men with equivalent qualifications. When such estimates are available, it may become clearer that women are not necessarily "costlier" workers.

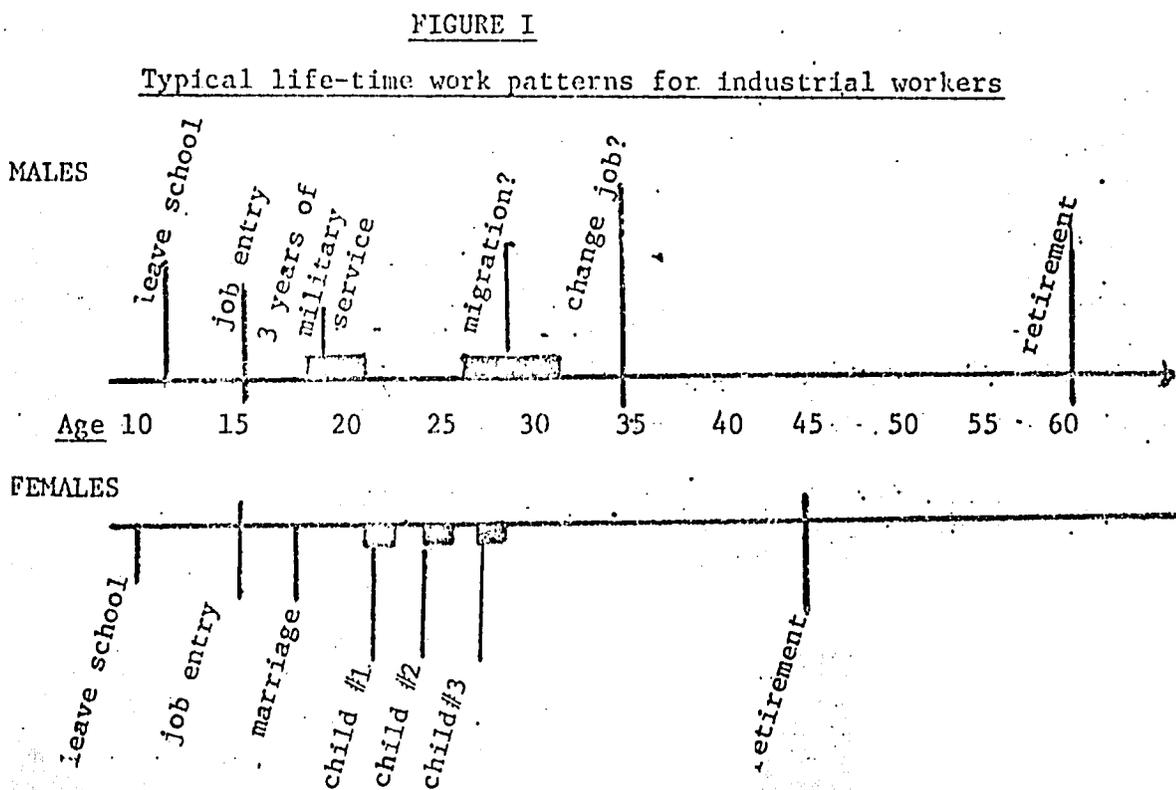
These cost calculations are made even more necessary by recent objective shifts in the structure and composition of the measured female labor force during the recent period of rapid social change. As a result of these changes, it has become even more important to reassess views based on an earlier situation. Within the measured female labor force, there have been changes in the age and marital structure, women's work options have expanded and the class and educational composition of the female labor force has been altered drastically. Within the unmeasured informal sector, other changes that may be occurring reflect this altered situation.

Changes in age composition are among the most important, as they imply that women are staying in the workforce longer. This makes it imperative to assess both costs and benefits over a worker's life-time career. Although statistics are not available on the size of workers' families, in general, it can be inferred from changes in age composition

In public sector industries, women now tend to work until retirement at age 45, with perhaps a 20% attrition rate over the 28 year period. Men are more likely to retire at age 60 but higher rates of attrition in the first 5 years of employment mean that fewer men achieve this extended tenure in a single enterprise. Some managers estimate male attrition rates at 40% in the first 5 years. For present purposes, we assume an average work tenure in the public sector of 20 years for both men and women.

In private industry, management interviews suggest that women's length of employment is increasing, as they continue to stay on the job after marriage. Men's employment stability is declining and they tend to circulate among several occupations. We estimate average employment length at 15 years for both men and women in the private sector.

Figure I shows typical work careers for industrial workers having less than Intermediate education, in a private enterprise, showing the patterns of job interruption typical for male and female workers, respectively.



Two differences are immediately apparent from this chart. Men tend to have two major interruptions in their job, each of approximately 3-4 years duration for compulsory military service and, increasingly, for labor migration. Women have shorter interruptions, spread out over a somewhat longer period.

The maximum number of children for which the law allows maternity and child-care benefits is three. For purposes of calculating the maximum legally allowable benefits, we therefore assume in Figure I that the woman worker has three children. If she takes a three-month maternity leave for each child, plus an estimated one month for child care and illness for each child, the total time of paid leave will be 9 months plus 3 months of unpaid leave. If, in addition, she takes a two-year leave without pay to stay home with preschool children, the total time away from her job amounts to 3 years. This is exactly the same total amount as that accumulated by a man drafted into the military service, where the current term of service is 3 years. In the case of the woman worker, the employer will be responsible for 25% of her time off (9 months out of 36).

For the male worker, military service and emigration may lead to the acquisition of new skills which may, quite possibly, result in a subsequent change of jobs. Women tend to continue in one job over their life-time work cycle, particularly in the public sector where they accumulate benefits, but also in private firms because the alternative employment options for women tend to be more restricted than for men. If they can, women will therefore hold on to their jobs as long as possible. For employers, this means that investments in training and accumulated experience of women workers are increasingly likely to be repaid in long tenure on the job.

7.3 Industrial Employment and Fertility

The subject of female employment and its effects on fertility has not been emphasized in this Report. Whether formal sector employment actually decreases fertility or not is a complex question on which conclusive data are lacking.

However, our field studies in Egyptian industry (Ibrahim 1980) have convinced us that women who opt for long job tenure in production jobs do in fact limit their fertility. They do so for practical reasons (less time for mothering) and because they have strong aspirations for a higher living standard for the family. One, two, or three children appears to be the modal pattern for public sector female workers. Young unmarried workers express lower fertility intentions.

Therefore, while lower fertility is a likely concomitant of women's decisions to continue their employment, it is only one of the important family changes that accompany female employment. Policies that encourage women's job entry in appropriate ways will benefit Egyptian society in a number of other ways, in addition to the likely lowering of family size aspirations. As a result of their earnings and exposure to other influences, women with regular jobs will be better able to provide better standards of health and nutrition to their families and will probably be more concerned with their children's education, having seen its importance in the labor market. Regular employment for women who are primary earners, supporting children and/or other adults, will also lessen the social-security burden presented by these households.

7.4 Absenteeism and Labor Productivity

Under present conditions, managers in Egyptian industry agree that absenteeism rates are high and roughly equal for men and women. In both cases, absences result from workers allocating time to second jobs. Men take second jobs because supplemental earnings are required when their first jobs are not enough to support families. Women already have second jobs -- their family responsibilities.

But there are some obvious and crucial differences. Reducing male absenteeism will most likely result from wage increases and bonuses, making supplementary earnings less necessary. Women's absenteeism is less likely to respond to direct monetary incentives.

Field observations and interviews with managers confirm that women are often worried about their children and about their family responsibilities. They do not necessarily translate their worries into frequent absences but personnel managers persist in the belief that they do -- perhaps because they feel that women should absent themselves instead of worrying. In the factories we visited for this Report, however, managers had not actually made any comparisons of absenteeism rates for married women and other workers but only spoke on the basis of their perceptions of women's expressed worries.

A 1978 survey of married female factory workers in Cairo showed that slightly more than half (115) of the 200 workers interviewed felt that their work was adversely affected by problems with child care (Halim 1978). Women were encouraged to make multiple responses and the following picture of their worries emerged:

How inadequate child care affects the
work performance of
female factory workers (Halim 1978)

Absence from work	mentioned by 88 women
Worry, stress	50
Lateness	10
Making mistakes	3
Denied promotion or bonus	3

In short, these women workers rarely reported that their work performance as such had been affected (e.g. making mistakes, denied promotion) but they reported stress and absenteeism most frequently. These, of course, inevitably take their toll on work performance.

Male workers, on the other hand, are reported to be unstable employees because they are circulating through the labor force, either in search of other jobs or moonlighting in other economic activities when they should be at the factory. Cairo Governorate Labor Registry Registration Accounts for 1980 (Table 2.2, Chapter 2), for example, show that a total of 12% of all applicants (male and female) with educational credentials were already employed and seeking other jobs. Although this proportion applies to more educated workers than are usually found in industrial production work, it is unlikely that the percentage of transfer-seekers is lower among the less educated but may be considerably higher.

Managers also complained that male workers emigrated in search of better paying jobs outside Egypt just at the point when their on-the-job training was beginning to show results in greater productivity.

A certain amount of job attrition also occurs within Egypt, especially among male workers, as wages in the private sector begin to equal and exceed those in the public sector. Of course, these workers will still be contributing to industrial production but their high turnover rates create headaches for employers.

What about young, unmarried women workers? Managers uniformly praised their work performance and we often had the impression that they would have preferred all of their workers to be single females. But would such an employment strategy be beneficial to Egyptian society? We think not, for several reasons.

An employment strategy sharply restricting the employment of women after marriage is customary in Japan. Although the Japanese labor force contains one of the highest proportions of economically active females in the world (about 50% of women aged 15 and over), women workers suffer sharp discrimination in wages, promotion, and access to occupations. A key feature of this employment strategy is the exclusion of women from the permanent employment system and their relegation to temporary or casual worker status, universally based on the expectation that women will leave the workforce when they marry and have children. This practice is euphemistically called "early retirement" and has led to an increasing number of law suits by women protesting employer discrimination (Cook and Hayashi 1980). In other words, because the departure of women from the labor force at the time of marriage is built into the system of employment, women receive little training and promotion but remain available to employers as a lower-status, low-paid labor pool moving in and out of employment.

In East and Southeast Asia, large employers of female labor have increasingly used the single-woman employment strategy in light industries, most often financed and managed by large multinational concerns with a tendency to remain only a short period in any one location. The employment of young single women by transnational corporations, particularly in electronics, has reportedly led to difficulties in a number of instances when employers were considered to be violating existing social custom. The suitability of this type of employment strategy has been a matter of active public debate in the countries concerned and among researchers (Hancock 1980, Snow 1980). In some of these enterprises, attempts to limit workers' employment to the period before their marriage have been unsuccessful.

In Egypt, such an employment strategy would be both unwise and unrealistic. Women workers are already staying in their jobs after marriage, especially in public sector factories, in increasing numbers. As noted, a considerable proportion of these women have children. Given the great importance of family life in Egyptian society, and the highly respected role that women play in family life, it is quite unlikely that women would remain in the labor force after marriage and childbearing without the consent of other family members. In other words, women respond to the needs of the family when they take a job and it is these needs that must also be considered as part of an equitable and socially acceptable employment policy in Egypt.

7.5 Costs of Child Care Services

Factories without their own day care services sometimes subsidize workers who place their children in neighborhood centers. Average payments per child per month are about LE 2,50 (Ministry of

Manpower, Cairo Governorate). Workers then pay an additional sum, equal to 25-50% of the employer contribution. These subsidies apply only to the first three children, until they reach age 6. The maximum cost to the employer, in the unlikely case of a mother of three children under age 6, would be LE 7.50 per month.

In 1981, men could earn as much as LE 3.50 per day in casual labor, indicating that wage incentives to reduce absenteeism among male workers would have to be very much higher than the cost of child care even under maximum conditions.

Where there are good day care facilities in the factory or neighborhood, the absentee rates of married women workers resemble the low levels recorded for single females. However, many working-class neighborhoods have not been reached by the network of centers of the Ministry of Social Affairs. Centers are often overcrowded and poorly staffed (Halim 1978). Hours of operation usually accommodate office schedules rather than factory shifts, creating serious problems for industrial workers with small children (Ibrahim 1980).

These depressing findings show that higher levels of investment will clearly be needed to provide quality child care for employed women. Their preferences are instructive. Those living near their places of work would prefer factory day care that matches their working hours (Halim 1978). Workers living at a distance opt for improved care in their neighborhoods because of the severe problems of taking small children on crowded public transportation or factory buses. A majority of these mothers also stress the importance of providing factory health care to their children. They have no time to wait in long lines at public clinics and often cannot afford to visit private doctors.

The current formula used in some Cairo factories to reduce male absenteeism is to offer a bonus of one week's extra wages per month. This suggests an alternative calculus for investment in child care. A moderately skilled worker with 5 years experience, working some overtime, can expect to take home about LE 12-15 a week, on the average.

If this amount per worker were invested instead in child care, expanded health care programs, and related services for women workers, dramatic improvements in female labor productivity could be achieved. These funds could be further supplemented by profit-sharing funds already earmarked for workers' services, although it may be unwise to leave such schemes to the discretion of employers and unfair to ask them to assume all of the costs for child care.

The Government of Egypt has long seen the health and well-being of Egyptian children as a societal rather than purely individual responsibility. Unlike expenditures on wage incentives to keep male workers on the job, expenditures for child and maternal welfare have direct returns for the society as well as the employer. For this reason, it can be argued strongly that government agencies should share the costs of these services with employers. In the case of public sector enterprises, this is, of course, simply a matter of accounting, but a significant one. Expenditures on child care, and other social services, must be treated differently in performance evaluation of the firm from other types of expenditures.

In the case of private firms, the problem is far more complex. Current law requires only that employers of more than 50 women must provide child care services. Yet most female industrial employment is

still concentrated in small enterprises. We believe that the Government of Egypt should extend assistance to these smaller employers to improve their ability to provide support services. Employers and women workers should have maximum flexibility to design programs that meet their particular needs.

Experience in Colombia provides one possible practical model. A national child care fund has been created by a levy on all employers, according to the size of the workforce, including both males and females. This amount is matched by the government. Groups of workers or establishments may then apply for these funds to implement their own plans for child care, which are approved and supervised by a regional education board. In countries that have long years of experience with public enterprises (e.g. Yugoslavia), the development of employment practices that make it possible for married women to retain their jobs after they have children might also be of relevance to similar potential programs in Egyptian public sector firms (International Center for Public Enterprises, Ljubljana).

In Egypt, as government decentralization makes available more project funding at local government levels, it may become possible to encourage factories, private voluntary organizations, and neighborhood councils to cooperate in the provision of conveniently located child care centers, where hours of operation correspond to factory shifts. A demonstration project of this kind is being sponsored in Ma'asara, south of Cairo, by the United Nations Voluntary Fund for the Decade of Women, beginning in 1982 (UNDP, Cairo) and should be watched carefully as a possible model for adequate child care services for Egypt's workers.

7.6 Child care: an opportunity for positive social intervention

Census figures show very clearly that a majority of female production workers are (or have been) married. While these workers may enter employment when young and single, many typically retain their jobs throughout marriage and motherhood. Egyptian society already accepts the idea of collective responsibility for the nation's children. Greater public investment in high quality child-care facilities provides an opportunity to translate this idea into reality and will also bring other benefits with it.

As the experience of many industrial nations shows, especially in northern and eastern Europe but also in North America, good preschool facilities increase the ability of children to benefit from school. They are better prepared to play and work with other children. If these preschool centers are well-run and pleasant environments for children and not just dismal dumping grounds for unhappy youngsters, they can become a factor in reducing primary school drop-outs, especially those due to poor school performance.

Good preschool facilities can also benefit children's health and nutrition, if well run and adequately financed. Increased survival rates of healthy children may then play a persuasive role in reducing fertility. It is unlikely that the provision of good child-care facilities will increase fertility by easing the burdens of mothers who must work and earn outside the home. It is a cruel joke to depend on the pressures of competing work responsibilities to persuade women to have fewer children and it does not work. Since women driven by economic need seek paid work regardless of time pressures or the adequacy of their child-care arrangements, it will improve the survival chances of their children if they are provided with good facilities. Women with better access to regular employment will also be better mothers than those who must depend on irregular and exploitative work.

In short, societies lose an important occasion for supportive social

intervention whenever child-care facilities are neglected or non-existent. From the viewpoint of society's interests, good child-care facilities for women who have paid jobs outside the home should be seen as far more than a convenience for mothers and employers. Judged from this point of view, it may be easier to reconsider the balance of costs carried by employers, workers, and the Government.

In addition, these facilities can provide significant new employment opportunities for child-care workers and for those who provide the training they must have to do their work well. Child-care workers can be drawn from among able but less highly educated workers, but they need systematic training to perform one of the most important jobs any society can offer -- the care of the nation's most precious human resources, its children. Work in child-care centers could be an important growth sector in the labor market for women who are otherwise losing traditional employment opportunities.

7.7 Summary

The argument that "women workers cost more" is widely used to explain manager reluctance to hire more women and, on occasion, to justify paying women lower wages.

Existing labor legislation in Egypt places some constraints on employers of females with respect to places, times and types of work. While these constraints may interfere with the freedom to hire women for certain types of jobs and restrict women's occupational mobility, they do not appear to be costly. Other legislation, however, mandates a pattern of leaves and benefits for female workers that appears to be much more costly than for males.

We have argued in this chapter that, under present conditions, these costs are offset or even exceeded by the benefits entailed by having a larger female component in the workforce.

Taking only the costs and benefits to the employer, to begin with, the following points must be considered:

- (i) fewer women migrate abroad than men;
- (ii) fewer women hold second jobs;
- (iii) women circulate less freely in the labor market because their employment options are more restricted than men's;
- (iv) women worry more than men about their competing family responsibilities but absentee rates are at least comparable and sometimes lower among women than among men;
- (v) maternity leave can total less than leave taken for military service;
- (vi) maximum costs of child-care contributions by employers (for 3 children under 6) are LE 7.50 per month while a one-week wage bonus per month to retain a moderately skilled male worker can average LE 12-15 per month.

Calculations for specific enterprises will, of course, differ according to location, composition of workforce, skill levels, etc. but the more general benefits for the society as a whole must also be considered. We have noted the following aspects in this chapter (see also Summary Report):

(i) women who opt for longer job tenure often limit their fertility, as part of a newly developed lifestyle, as field studies of production workers in public sector factories show:

(ii) good quality child-care facilities can improve children's chances for satisfactory school performance later, thus decreasing drop-outs due to poor performance;

(iii) good child-care facilities can improve the health and nutritional status of children, hence decreasing the importance of high child mortality rates as a factor in high fertility;

(iv) income distribution can be improved by increasing the number of adult earners per household, if adult women can take regular jobs with child care facilities;

(v) welfare costs can be lowered if women who are primary earners can obtain regular jobs with child-care facilities.

Because these social benefits can be substantial, we also argue that Government should assume a larger share of these costs, and that existing cost-sharing arrangements should, in any case, be renegotiated. In public sector enterprises, the costs of social services should be separated out from production costs in the performance evaluations of managers (see L. Jones report).

The assessment of present and alternative calculations of the costs and benefits of expanded child-care facilities for specific enterprises and the society as a whole is outside the scope of this report, as far as specific calculations are concerned. These points are offered as guidelines for needed future research.