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AN EVALUATION OF INDUSTRIAL AND
COMMERCIAL JOB TRAINING FOR WOMEN
IN MOROCCO: PROJECT NO. 608-0147

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Introduction

Morocco has one of the highest rates of female participation in education among the Arab states. Nonetheless, at the time of the 1971 census, the literacy rate for Moroccan women was only 13 percent, compared to 25 percent for the population as a whole; illiteracy rates for rural women were estimated to be as high as 98 percent. While 37 percent of schooled aged boys were attending school, only 19 percent of school aged girls were doing so.

There are a number of factors that contribute to these male/female education differentials. The opportunity costs of schooling children from low-income rural families are high, as are the actual monetary costs of books and clothing; and while the education of sons is seen as an economic investment by the family, it has not traditionally been viewed as such for girls.

Despite their limited preparation for participation in the labor force, however, women in Morocco are increasingly being called upon to provide economic support for themselves and their families. Between 1960-71, the number of economically active women rose by a phenomenal 75 percent, while the increase for men was only 1960. In urban areas, the number of women in the labor force approximately doubled.

By now, women constitute one third of new entrants to the urban labor force, and the proportion of female workers continues to rise. The majority of new entrants to the female labor force are under 25 years of age, or over 45 years of age and (typically) divorced or widowed. Given a very high divorce rate (approximately 50 percent), considerable male unemployment, and emigration of males to work abroad, estimates of the proportion of households headed by women range from 25 to 33 percent of all households. 83 percent of female household heads are either divorced or widowed. Since households headed by women tend to be larger than those headed by men, the economic burden on women working to maintain their families is great.

In general, women's increasing participation in the labor force of Morocco is a result of economic necessity; more women work now than ever before because more women are now responsible to some degree for the economic support of Moroccan households. Sixty percent of working women are members of households where total income for five or six people is less than U.S.\$45 per month.

Unfortunately, unemployment rates for women are quite high, especially amongst the age groups in which new labor force entrants are concentrated. In 1971, 18.8 percent of women aged 40-64 who wanted to work were unemployed; 20.2 percent of economically active women aged 20-24 were unable to find employment. In urban areas, those who do manage to find employment in the private sector are concentrated in service jobs (maids) and textile and ready made cloth industries where wages are low and mobility limited. Since 1960 there has been a 13 percent rise of employment in these areas, and a decrease in wages.

In the midst of high unemployment rates for both women and men in Morocco, however, severe shortages of appropriately trained technicians and skilled industrial workers exist. This is a result of the traditional and highly formal French education system. Large numbers of secondary school dropouts find themselves unable to obtain well paid "desk" jobs because they lack the baccalaureate degree awarded upon passing exams at the end of 12 years of schooling; at the same time they are unprepared for skilled or semi-skilled labor occupations. It was in this context that the Industrial and Commercial Job Training Project for women in Morocco was developed, based on the premise that vocational training for women could improve women's employment opportunities and contribute to the pool of skilled labor required for Morocco's industrial development.

The Project

The goal of the project was to provide increased employment opportunities for women in the industrial and commercial sectors of the economy through vocational skills training. The Office of Technical

Training and Job Development (OFPPT), then under the Ministry of Labor, was selected as the organization through which training would be provided. OFPPT was, at the time, operating 30 training centers throughout Morocco.

In December 1976, AID had evaluated training programs for women and found that women were effectively excluded from OFPPT's industrial training programs. Women were restricted to training in the commercial sectors: typing, shorthand, bookkeeping, and accounting. In fact, commercial training in all but the last was exclusively female; and accounting, although mixed, was heavily dominated by males. Other factors that served to limit female access to training included the lack of dormitory facilities for women and limited attention to the placement of female graduates in jobs.

The Ministry of Labor stated that the training programs did not purposefully exclude women but resulted from a reluctance on the part of Moroccan women to seek admission to the industrial training courses. In principle, the GOM supported integration of the sexes in the training program and also in the labor market itself.

Nevertheless, the Labor Ministry recognized its problem in recruiting and training women and requested AID to collaborate with OFPPT in establishing a pilot program for the training of women in industry-related areas. This special intervention would serve as a model for the promotion of industrial training and employment for women. Eventually, the pilot program would be replicated throughout the OFPPT system.

The Casablanca training center was selected as one of the sites for the pilot program because 70 percent of Moroccan industry is located near Casablanca, as are the major architectural and construction firms. Fes, a newly industrializing province was the second site of the pilot activity.

Each center was to have both men and women students, although a separate dormitory would be reserved for women students at Fes (a development which never occurred). The selection criteria for the women students was to be the same as for men, and women would compete with men on a national

examination which is given each July. Special efforts were made to inform women of the examination and encourage them to apply. For example, the official announcements specifically stated that women could apply. The notification was published in the French and Arabic newspapers, and all secondary schools with female students were informed. The OFPPT had previously utilized the state-owned radio and television to announce the entrance examination; the announcement, under the project, clearly indicated the eligibility of women candidates.

In addition to the national exam, however, women candidates were given a battery of five to seven performance, language, and aptitude tests, depending on their entry level and whether they applied for commercial or industrial training. Women whose scores fell below a minimum level were eliminated. The profile of each woman at or above the minimum score was then examined for orientation towards her stated preference for skill training. If the tendency indicated by the profile matched her preference, she would be admitted to the skill program of her choice. If not, she would be advised about the discrepancy and encouraged to join the program that fit her abilities. In some cases, women refusing the advice were not admitted for training.

The initial areas of specialized industrial training for women with nine years of formal schooling were drafting, electricity, and electronics. Commercial courses in accounting and secretarial skills were offered to women who had completed 12 years of schooling.

The project, beginning in September 1979 and concluding in March 1983, provided three trainers with practical experience and professional expertise in the respective fields of electricity/electronics, drafting, and accounting/secretarial skills. These technicians were to introduce into the training program a more practical experience-oriented approach and transmit these methods to the Moroccan teaching staff. In collaboration with the staff of the two pilot centers and the teacher training institutes these technicians were to demonstrate appropriate teaching techniques, teach model units using such techniques, assist in the preparation of teaching plans and instructional materials, review curriculum in the areas specified above and

supplement their contents, where necessary, to match the skills required for employment, and devise and implement plans for in-service training in the new methods and knowledge required to improve the quality of instruction at the pilot centers. The contractor (AMUDEAST) was also to provide equipment to be used in training in the three fields of specialization.

In addition to the three training experts the contractor provided the services of three other advisors in the areas of educational administration (team leader), student counseling (social psychologist), and job development (human resources economist). Two technical reports were eventually prepared by this team: "Investigation of the Vocational Training Needs of Female Personnel" written by the human resources economist (referred to as the Economic Report) and "An analysis of the Status of Employed Women in the Commercial and Industrial Sectors in Casablanca: Vocational Training to Meet the Demands of Market Employment Needs" written by the social psychologist (referred to as the Socio-Cultural Report).

The project was also to provide university training in the United States for six Moroccans to be trained to carry on the supervisory activities of the project staff once the project had been completed. Two candidates with a B.S. in economics were to study human resources economics at the graduate level. Upon their return, they would work closely with the Councils in the various regions, to analyze the labor market as it affects women workers, to promote job opportunities for women, to assist in job placement, etc.

Two Moroccan women were to eventually replace the project social psychologist and perform the same function of counseling the women trainees and the women workers. They were to have pursued a Master's degree in counseling in the United States.

Two more candidates would do graduate work in vocational education: one concentrated on industrial skills training, and the other on business skills training. They were to serve on the central staff of OFPPT.

These six participants were to spend three years in the United States, including five months of language training, returning in time to have a six-month overlap with the project team.

Later in the project, three additional Master's level participants were also sent for training in civil engineering and computer sciences, new subject areas in which OFPPT plans to offer training.

Ten one-year technical trainees were given junior college or undergraduate-level training in technical areas in the U.S. and were to return to OFPPT training centers as instructors. Four OFPPT Administrative Staff Trainees were given short-term training in performance-based teacher education and evaluation methodologies at the Ohio State University.

Under the Project Grant Agreement the OFPPT was to include women professionals on the headquarters staff of OFPPT, provide industrial and commercial skills training for women at two pilot centers, and develop a system of job placement and performance evaluation.

A final evaluation of the project was conducted in May 1983 noting that the overall impact of the project was positive. Several aspects of the project were considered less than successful, however. It was found, for example, that by the end of the project the special entrance requirements for women had been dropped and women were being given the same set of classical entrance exams being given to men; i.e. Math, French, and Arabic. OFPPT explained this shift as being in the spirit of the project, the integration of women into all training phases following the pilot stage. Applying such intensive testing procedures annually to approximately 15,000 candidates would be too burdensome. In the end, the evaluators concluded that selection procedures were adequate.

In addition, the evaluation noted that no formal job placement and follow-up mechanism had been developed, and all but one of the six original long-term participant trainees had not returned from the U.S. to work at OFPPT despite a pledge to do so for a period of eight years.

Finally, the evaluation found the production of the two technical reports inadequate. The Economic Report, which was to constitute an important data base on employment possibilities for women, took 37 months to complete. It was finally produced in October 1982 and included only calculations for the period up to May 1980, based on a significantly biased set of responses to a questionnaire on numbers of employees and vacancies in industry. Its usefulness was found to be extremely limited. The Socio-Cultural report, which was to investigate social, cultural, and economic constraints affecting the employment of women graduates from OFPPT centers was based on an inappropriate target population and too small a sample size. Its results could not be generalized to women trained at OFPPT and it was therefore of little use in helping to improve the integration of women graduates into industry.

CDIE Evaluation

Our May 1985 appraisal of the impact of the project is considerably more positive, mainly because the CDIE mandate is to view the project from a broader WID perspective. While the project may have failed to attain some shorter term objectives, it is clear that it accomplished precisely what a pilot project should accomplish, i.e. the initiation of beneficial changes that continue and even deepen after the completion of the pilot effort.

It is true, as the final evaluation notes, that the benefits derived from the technical reports prepared under the project are extremely questionable. Since 1983, however, four of the six long-term participant trainees have returned to work for OFPPT or its parent ministry (now the Ministry of Equipment). All of the shorter-term trainees are working in OFPPT training centers and both they and their students have quite obviously benefited substantially from their training in the U.S. The failure to establish a formal placement system, due in part to OFPPT's hesitance to perform functions that are the specific mandate of the Ministry of Labor, has not stood in the way of informal placement efforts that appear to be quite successful given the Moroccan economic context. Finally, the discontinuation of elaborate admission procedures for women has not meant

the complete elimination of screening and orientation efforts; the growth in numbers of female trainees, and their low dropout rates, indicate a fairly successful approach to admissions and student counselling. The present system is, in fact, based much more firmly on an integrated approach.

More importantly, it seems clear that the central question of whether the project significantly and positively affected the situation of women and the development efforts of the Kingdom of Morocco can be answered with a resounding affirmative.

Access to Vocational Training

When the project was initiated in September 1979 no women were being trained in the OFPPT's industrial job skills courses; their participation in commercial skills training was limited to typist and secretarial training while accounting courses were dominated by men. The purpose of the project was to integrate women into three industrial skills areas--electricity, electronics, and drafting--and to improve their training in commercial skills. Recruitment and orientation of women focused on these specialties, as did the provision of training equipment, assistance with curricula development and teaching techniques. Table 1 illustrates the enrollment of women in project sponsored classes over the life of the project.

More revealing, however, is a look at female enrollments in all OFPPT training sectors since the initiation of the project (Table 2). The overall proportion of women enrolled in industrial and construction sector courses is still much lower than that of men, mostly because courses in automechanics, heavy machinery, masonry, and plumbing still do not attract large numbers of women. Substantial numbers of women do enroll, however, in electronics and electricity courses, industrial drafting, construction drafting, automation, office machinery repair, and refrigeration and cooling courses. The percentage increases in women's participation in vocational skills training have been quite impressive since the first year of the project, as Table 3 shows.

The OFPPT has attracted women trainees by specifically advertising its programs for both young men and young women, a simple but extremely effective device introduced through the project and continued since its completion. In addition, the office maintains a counselling program and uses a two-pronged strategy of working with female applicants to encourage them to choose industrial fields of training, and working with employees to encourage them to hire women trainees.

It was difficult to determine exactly how girls fare in the OFPPT programs, in terms of dropout rates. Figures had been compiled at only one of the four training centers visited for this evaluation. They cover two graduating classes, 1981 and 1982, and indicate that 18 percent of women recruited in 1979-80 failed to graduate in 1981, and 27 percent of those recruited in 1980-81 failed to graduate in 1982. Instructors at all the centers were convinced, however, the dropout rates are similar for boys and girls and, because entrance requirements and orientation procedures are well suited to the curricula covered in training courses, dropouts are not usually due to inability to cope with the course requirements.

Staff at each center visited for this evaluation were, without exception, quite enthusiastic about women's participation in their training programs. In some centers, in fact, priority is given to female applicants for certain specialties in recognition of the fact that while all training fields are open to women, they will not easily find employment as automechanics, for example, and therefore should be given every chance to be trained in more likely fields such as electronics.

The project, therefore, has had a great impact on participation of women in Morocco's vocational training programs. Moreover, their participation can be directly and fully attributed to the pilot project since, prior to the project, no advertisement was made for female trainees, nor were any accepted into other than commercial skills areas.

Women's access to resources has then been directly improved through this project, and on a significant scale. Since the OFPPT fully intends to continue and expand its recruitment of women, the numbers of women affected

by the pilot project's innovation will increase with every class of trainees.

Employment

At time of final evaluation of the project in 1983, 70 percent of women graduates of the pilot centers had been placed in jobs. Given Morocco's economic deterioration in recent years, the figure is probably not that high now but due to the lack of monitoring by OFPPT no data is available with which to update that figure. However, there is a consensus among graduates, trainers, and employers that the employment rate for OFPPT graduates is much higher than it would be among women with the same levels of formal education, but no vocational skills training. It is also clear that the staff make every effort to recommend women trainees to employers, sometimes even being biased in favor of women vs. men because the training centers get such positive feedback from employers of women graduates.

The informal OFPPT placement strategy is usually to convince an employer to accept a woman for her mandatory 2-month apprenticeship, which costs the employer nothing. Typically, employers are so pleased with trainees during this period that they offer them permanent jobs and often will ask the training centers for more apprentices the following year.

Fifteen employed women graduates were interviewed for this evaluation-- five of them in-depth. Several of them were the only women in their firms because they are industrial drafters for heavy machinery which is then produced by male factory workers. They all said, however, that they are quite comfortable in their positions and have good working relationships with fellow employees. They all make substantially more than they could have earned in the public sector because of Morocco's strict system of paying salaries according to years of formal education, and whether or not the baccalaureate exams were passed at the end of secondary schooling. None of the interviewees had passed these exams, yet they were earning about as much and sometimes more than those who have passed the exams. All said that their training was completely relevant for their jobs and they feel

confident of their skills. Most said, however, that they would not now consider aggressively pursuing even better jobs because of the difficult employment situation in Morocco. They were all pleased to have taken the training and to be employed where they are.

Thus, since female trainees employment rate seems good, as does their wage level, the project has improved the labor productivity of women, increased their employment, and ensured good remuneration for their labor.

Cost of the Project

The Final Evaluation of the project, undertaken by Creative Associates, Inc., details the costs of the project, as follows:

ITEM	COST U.S.\$
Original Master's candidate (travel cost included)	73,996
Later Master's candidate	75,691
One-year technical trainee	25,465
Five-week administrative staff	4,167
Local trainee - project-life amortization (OFPPT cost included)	4,367
Local trainee - 20 year amortization (OFPPT cost included)	3,138
Economic Report	178,617
Socio-Cultural Report	68,571
Computer	67,500

The cost of the two technical reports is high, particularly that of the Economic Report which is generally agreed to have been poorly done, and basically useless for the purposes of the project.

Given the consensus that the one-year technical training program was quite worthwhile and successful, its cost per trainee seems reasonable; costs for masters candidates were high, but given U.S. costs for travel, room and board, tuition, books, etc. there may have been no way to lower them. The cost does make it imperative, however, that the masters trainees are given the opportunity to fully exploit their training whether in OFPPT or elsewhere in the Government or private sector of Morocco. All the master's trainees are currently fulfilling their obligation to work for the GOM for 8 years.

The cost per local trainee at OFPPT centers varies according to whether or not the training equipment provided under the project is amortized over 20 years or over the life of the project. This calculation assumes that 562 women benefited from local training over the life of the contract. The cost is relatively low, even under this assumption. In this project, however, a strict notion of cost per participant during the contract period may not apply; it might be said, for example, that every woman trained in industrial skills at OFPPT centers since the inception of the project is a beneficiary since no women were trained in those areas prior to implementation of the project. This would mean that the cost per local trainee would diminish with every graduating class--a concept that is not particularly useful for financial analysis, but which clearly points to the innumerable benefits stemming from this one pilot effort.

An important lesson seems to be that shorter term participant training and provision of equipment, in return for relatively costless efforts to recruit women trainees, might form the basis of designs for future projects of this sort that would deliver major beneficial results at very low cost.

Monitoring and Evaluation

It is clear from the impossibility of obtaining specific reliable data on dropout rates, job placement, and salaries of graduates, that the project has fallen short in the areas of monitoring and evaluation. A much better use of the large amount of funds devoted to technical reports which were not critical to the project's success would have been to provide competent technical assistance with design, equipment, and staffing of a monitoring system built in at the start of the project. This project seems to have achieved a major success with the integration of women into vocational skills training in Morocco, as well as improvement of their employment opportunities. It would be invaluable to be able to better document the degree of that success.

Issues

Several important issues arise in the context of this project:

Job Placement. As the Creative Associates evaluation notes, there is no formal job placement mechanism at OFPPT. Given the increasingly difficult economic situation in Morocco, such a mechanism might be beneficial for both male and female OFPPT graduates. On the other hand, it might make job placement overly bureaucratic. As it is now, the training centers establish good relationships with employers and place women (and men) without lots of form filling, etc. which could discourage employers. In the end, it may be more cost effective to focus on providing good training, an informal placement assistance, and then let the market work.

Emphasis on Certain Specialties

Giving priority to women in certain specialties such as electronics or drafting is done with nothing but good intentions. However, we have to wonder if, ironically, this may create yet another occupational ghetto for

women in the long run. If all electricians are women, will their wages fall, or fail to increase as rapidly as when men dominated the profession? This kind of wage depression has occurred in the United States when women have moved in to previously all-male fields. Note: There is no danger of this in Morocco at present since the percentage of women in technical occupations is still low.

Supply of Skilled Workers

The Government of Morocco is giving new priority to vocational training and is increasing (almost doubling) the numbers of trainees in all its skills training programs. This will increase the supply of skilled workers and may result in more difficulty finding employment, lower wages, etc. It will be important, therefore, to structure training that really ties in to industrial needs. USAID/Morocco should perhaps consider supporting the GOM's new priority by assisting with this critical aspect.

Conclusions/Recommendations

Overall the "Industrial and Commercial Job Training for Women" project has been, from a WED perspective, quite successful. It has significantly improved women's access to a productive resource (training), improved the labor productivity of women, enhanced their employment opportunities, and ensured good remuneration for their labor.

Future projects might use a streamlined version of this project design as a prototype for effecting great impact through relatively simple, although significant change.

Given that pre-project studies indicated a demand, in general, for skilled workers, there was no real need for the technical reports commissioned under the project. They were completed too late to be of assistance anyway, so in the future a more cost-effective approach might be to forego such studies.

Short-term, specific, participant training was successful in this project and should be emphasized in future projects. Longer-term training will contribute, in general, to development of a country's human resources but may not be critical for projects of this sort when reasonably well staffed host country institutions are operating prior to the implementation of the project.

Future projects might put more emphasis on job placement components, but if so, they should provide the requisite technical assistance, equipment, and staff to ensure that a simple and effective system is developed.

Finally, monitoring mechanisms are enormously important for future projects. These mechanisms allow for fine-tuning of project components during implementation and also provide the basis for judgements regarding project success and the desirability of replication.

TABLE 1

<u>Sector</u>	<u>1979-1980</u>	<u>1980-1981</u>	<u>1981-1982</u>	<u>1982-1983</u>	<u>TOTAL</u>
<u>Industrial</u>	-	80	68	99	247
<u>Construction</u>	20	36	47	51	154
<u>Commercial</u>	30	30	55	144	259
TOTAL	50	146	170	294	660

TABLE 2

PERCENTAGE OF WOMEN TRAINEES IN OFPPT 1979-84

SECTORS	1979 - 1980		1980 - 1981		1981 - 1982		1982 - 1983		1983 - 1984		Overall Total	
	Total	Girls	Total	Girls								
Industrial	3026	1.62	3594	3.34	4491	6.48	7400	6.93	9415	7.25	27926	5.93
Construction	5831	0.65	4696	0.96	5396	0.93	7407	1.85	7971	2.11	31301	1.40
Commercial	825	55.76	988	61.84	1252	64.86	1577	69.94	1805	79.61	6447	68.61
Tailoring	1042	22.55	1169	22.24	1230	27.89	1337	31.79	1429	30.09	6207	27.28
TOTAL	10724	7.29	10447	9.92	12369	12.09	17721	12.29	29620	13.18	71881	11.42

TABLE 3

RATE OF INCREASE IN PROPORTION OF FEMALE ENROLLMENTS

	<u>1979/80 - 80/81</u>	<u>1980/81 - 81/82</u>	<u>1981/82 - 82/83</u>	<u>1982/83 - 83/84</u>
Industrial	106 %	94 %	6.9 %	4.6 %
Construction	47.6 %	9 %	98.9 %	14 %
Commercial	10.9 %	4.9 %	7.8 %	13.8 %
Tailoring	0%	25 %	13.9 %	0 %