SEX DISCRIMINATION IN THE LABOUR MARKET OF KUWAIT

by Djehane A. Hosni and Sulayman S. Al-Qudsi
University of Central Florida, USA and Kuwait Institute for Scientific Research, Kuwait

Introduction

Kuwait belongs to a grouping of countries — the **Arab** Gulf States — with unique characteristics in relation to other developing countries. Their vast financial resources coupled with their small populations have given them the highest per capita incomes in the world. Kuwait, **like** its neighbours, faces a challenging manpower dilemma. Its national economy has been predominantly manned by foreign workers. Its ultimate goal *is* to reverse that labour trend.

Within this framework, research devoted to the role of women in the labour market of Kuwait *is,* therefore, important for a number of reasons. First, the government, in its latest five year plan, expressed serious concern over the development of human resources on the national front. The overall assessment of the status of female workers in the economy *is* thus warranted. Second, unless more women are induced to join the labour force, foreign manpower would continue to dominate the labour market. Third, in the spirit of the 1985 International Conference on Women held in Nairobi, Kenya, it *is* inviting to initiate such an evaluation that would, hopefully, put into perspective women's status in the labour market of this small, yet oil-rich economy. Fourth, studies on sex discrimination are of very recent origin to the developing countries in general. To this part of the world, in particular, it *is* new and daring to unveil women's lives and working conditions.

In 1983 native male workers in Kuwait earned an average monthly salary of KD 390 (US $1,365). Women earned less than two-thirds of this at KD 245. This a'rticle examines the sources of earnings differential by sex. The work of Oaxaca[1] and Malkiel and Malkiel[2] has spurred a surge of American and European studies[3,4] which use the basic human capital model for decomposing sex-specific earnings into " endowments" and "discrimination" components. In his analysis of the Cyprus labour market, House[51, has provided the first estimates for a developing country. Gannicott[6] has recently documented the sex earnings disparity in Taiwan. An examination of the unusually rich microdata of Kuwait's Labour Force Survey of 1983[7] should provide sharp tests of the earnings disparity according to sex in this oil-rich economy.

Statistical Background

The emergence of Arab Gulf women as a social force and their rising labour force participation is one of the many dynamic changes reshaping the Arab Gulf society today. Historically, early marriage confined women to home to raise children. The sudden affluence of the region contributed to a higher level of female educational attainment and at the same time led to the acquisition of the latest labour-saving household devices[8]. Domestic servants (maids, cooks, baby-house chores. At the same time the service-oriented economy generated employment opportunities suitable to women. The result was that more and more women joined the labour market. This trend is expected to continue and to become even more pronounced in the light of the fact that females out-number males in the age-bracket 25 to 39. Unmarried women will, therefore, have to turn to the labour market.

The dichotomous nature of Kuwait's population and labour market makes it imperative to differentiate between the status of native and non-native women. The massive labour inflows that took place over the past 20 years embodied a large number of female workers. They were needed in all the female-teaching jobs, in the nursing posts and in the social services, and a large influx of Asian females was also brought in to work as housemaids in the typical affluent Kuwaiti home. In addition, many females entered the country as dependants to the foreign male workers, some of whom eventually traded their aprons for a pay cheque in the labour market.

The percentage of Kuwaiti female workers to total females in the workforce has increased from 12.5 per cent in 1965 to 18.8 per cent in 1985. In 1980, while native women made up slightly over 50 per cent of the native population, their share in the nationally employed labour force was only 13.3 per cent. By 1985 while Kuwaiti women still made up 50.2 per cent of the native population, their share in the nationally employed labour force jumped to 19 6 per cent. The non-native female shares in the non-native population were 37.4 per cent and 38.3 per cent in 1980 and 1985 respectively. The shares of non-native females in the non-native

The authors would like to acknowledge the helpful comments of an anonymous reviewer. The competent research assistance of Amal Al-Fangary and Fouad Al-Dawood is greatly appreciated.

workforce were 12.8 per cent and 19.7 per cent in the two respective years. In absolute terms, however, the non-native female workforce was 3.5 and 4.3 times the native workforce in 1980 and 1985 respectively, as shown in Table I.

Over the past three decades tremendous efforts and financial resources were invested in order to eradicate illiteracy among both sexes. The commitment to female education began to show significant results during the past decade and continues to do so in the current decade, with 52.1 per cent of the entire public school population in 1984185 being female [9]. In 1980 total female illiteracy rate was 37.8 per cent, much higher than the male illiteracy rate of 24.3 per cent. Among native females the illiteracy rate was about 49.6 per cent, more than double that of non-native females, 22.9 per cent

Further improvement in the female literacy rate was achieved during 1980-1985 through the expansion and extension of formal schooling, as well as adult education programmes following the enforcement of me compulsory law of illiteracy — abolishment of 1981. In 1985 the total female illiteracy shrunk to 26.9 per cent and that of male, to 15.5 per cent. Among native females the rate was 36.9 per cent versus 19.5 among native males. The corresponding female and male rates among non-natives were 19.1 per cent and 21.1 per cent.

The census of 1985 revealed that more than 70 per cent of the native female workers have at least completed secondary education

It has been argued by many researchers that education p lays a pivotal role in the emancipation of women, particularly in Islamic cultures where it is the key to more d iversified roles and determines the level of participation in occupations[10]. The vigorous pursuit of higher education and careers has resulted in big strides for Kuwaiti women in terms of participation in the labour force. Therefore, female labour force participants tend to be more educated than non-participants. In fact the educational level of female workers is much higher than that of their male counterparts. The census of 1985 revealed that more than 70 per cent of the native female workers have at least completed secondary education, compared to 29.3 per cent of the native male workers. Among non-natives the corresponding percentages were 35.6 and 30 per cent for females and males respectively[11]. With the spread of education and modernisation, Kuwaiti women have become deputy ministers, deans of a mixed university college, engineers, nurses, medical doctors, teachers and social workers. An attempt was even made at the beginning of 1982 to give women the right to vote for the National Assembly, but the majority of assembly deputies rejected the proposal as an "imported idea"[12].

	Natives				Non-natives			
	Male	(%)*	Female	(%)*	Male	(%)*	Female	(%)*
1965	**41,926**	64.8	1,092	1 8	133,603	94 3	7,676	**5 4**
1970	63,314	62 9	2,055	2 1	162,286	91 4	14,541	8 2
1975	**84,367**	71 2	7,477	6.2	185.009	92.0	27,729	13 2
1980	**93,588**	66 8	14,172	10 3	334,644	93 2	49,105	12.8
1985	101,607	59 5	24,803	13 8	436,650	91.7	107,325	19 7

°Percentage of population in the labour force.

Source: Central Statstical Office, (CSO Ministry of Planning, Annual Statstical Abstract, **1985** and Central Statistical Office, (CSO) Ministry of Planning, Population Census of *1985,* Vol. I(, February *1986.*

Table 1.
***Size and** Composition of the Labour Force Kuwait 1965-1985*

With this setting in mind, our first task is to review the existing female industrial and occupational structures. The discussion focuses on the native and total female employment. Agricultural employment is not excluded because, contrary to other developing economies, its share of the labour force is very insignificant. The sectoral distribution of the female labour force points to their concentration in the social services sector (around 90 per cent). Yet, their share of this sector's workforce is only one-fourth (16.6 per cent for natives) as indicated in Table II

Occupational differentiation by sex is clearly obvious in the labour market of Kuwait (see Table III). By major occupational groups, women in 1980 comprised 31.5 per cent of the professional and technical workers 145 per cent for the natives), 22.5 per cent of service workers (only 4.1 per cent for natives), and 17.6 per cent of the clerical workers (19.7 per cent for the natives), even though both groups total 13 per cent of employment in all occupations. They are under-represented in such major groupings as production workers, sales workers, managers and administrators. Moreover, although more than proportionately represented in the professional and technical occupations, they largely serve as teachers in elementary and secondary schools[13]. On a finer occupational breakdown, Kuwaiti females are heavily concentrated in a small number of occupations. The natives work predominantly as teachers, clerical assistants, and building supervisors. They are altogether excluded from more than 32 occupations. However, some occupations are exclusively held by females. Nursing, for example, is an occupation that has been defined as "female" by Kuwaitis. Not even one Kuwaiti man is a nurse. All male nurses are foreign. This exclusion reflects the male-female job segregation among natives (internal effect), as well as the employment differentiation between national and foreign workers (external effect).

A clear parallelism is depicted between the native and total figures. The same concentration pattern is maintained except for the service workers reflecting the operation of the external effect as more than 80 per cent of non-national females in services work as house-maids.

In relative terms, the native female shares are above the totals in the professional and clerical occupations. Given the same relative share in the respective labour forces (13 per cent), a severe job segregation problem is experienced by natives.

Sector	Number of all females employe&	Share of all females in total sectoral employment[2]	Distribution of employed females[3] (%)	Number of native females employed	Share of native females in sectoral employment of natives` 1%)	Distribution of employed native females I%)
Agriculture	80	0.1	0.1	52	1.3	0.4
Mining	220	3.3	0.3	33	1.4	0.2
Manufacturing	721	1.7	1.2	72	2.2	0.5
Construction	574	0.6	1.1	12	1.0	0.1
Utilities	32	0.4	0.0	29	1.4	0.2
Trade	1,877	3.2	3.0	64	1.4	0.4
Transport and communication	1,482	5.0	2.4	652	8.3	4.7
Finance, insurance	1,807	14.2	2.9	350	12.4	2.5
Services	55,286	25.0	89.0	12,565	16.6	91.0
Total	62,099	13.0	100.0	13,829	13.3	100.0

1All females = Kuwaiti + Arab + non-Arab females
[2]The share of all females to all male - all female sectoral employment
[3]Computed by dividing female employment in each sector by total
4Employment of natives refers to employment of Kuwaiti males and females
Source Ministry of Planning, Kuwait, Annual Statistical Abstract, 1984, Central Statistical Office, Kuwait.

Table II.
Female Emprovement *by Sectors, 1980*

Occupation	Number of all females employe&	Share of all females in occupational employment[2] (%I	Distributio n of all employed females[3]	Number of native females employed	Share of native females in sectoral employment of natives` I%)	Distribution of employed native females (%)
Professional and technical	24,654	31.5	39.7	7,189	44.6	52.0
Administrative and managerial	128	2.0	0.0	69	3.3	0.5
Clerical and related workers	10,634	17.6	17.1	4,855	19.7	35.1
Sales	548	1.7	0.8	51	0.9	0.4
Service	25,735	22.5	41.4	1,539	4.1	11.1
Agricultural, animal husbandry and fishermen	49	0.5	0.1	40	1.0	0.3
Production workers and labourers	351	0.2	0.1	86	0.7	0.6
Total	62,099	13.0	100.0	13,829	13.3	100.0

'All females = Kuwaiti + Arab + non-Arab females
[2]The share of all females to all male + female sectoral employment
[3]Computed by dividing female employment in each sector by total
4Employment of natives refers to employment of Kuwaiti males and females
Source: Ministry of Planning, Kuwait, Annual Statistical Abstract, 1984, Central Statistical Office, **Kuwait.**

Table III.
Female Employment by Major Occupations, 1980

Following the methodology of the United Nations Table IV). The female share is calculated for those Economic Commission for Europe[14], the female occupations where their proportions exceed their occupational segregation pattern in Kuwait is measured overall employment share of 13.3 per cent (see column and compared to House's results on the female 2). These occupations are referred to as female-situation of another small economy, i.e. Cyprus (see dominated occupations. It is clear that women's share

Country	Total employment	Female-dominated occupations			Male-dominated occupations		
		Percentage of females in occupation	Percentage of female labour force		Percentage of females in occupation		Percentage of labour force
			Actual	Hypothetical	Actual	Hypothetical	
Kuwait native	13.30	30.00	87.00	39.20	2.85	12.90	60.60
Total	13.00	24.20	98.00	52.00	0.46	2.00	48.00
Cyprus	32.40	55.60	87.70	52.10	8.10	12.30	47.90

Table *IV.*
Women Snares n *Female and Ma e Dominated Occupations*

in their most favoured occupations is still low. By the same token, female share is calculated for the remaining occupations or the male-dominated ones (see column 5) . It is evident that women are poorly represented *in* male-dominated jobs, while men's representation in female-dominated jobs is high. Columns 3 and 6 in Table IV give the actual percentages of females in women-dominated and men-dominated occupations, relative to the total employment level. Their hypothetical shares are portrayed columns 4 and 7. They are computed on the assumption of attaining the overall female share of 13 per cent in every occupation. Consequently, a much lower percentage (39.2 per cent for natives and 52 per cent for total) of female workers would be engaged in the so-called female-dominated positions. On the other hand, the male-dominated occupations would absorb significantly larger shares (60.8 per cent for natives and 148 per cent for total) of females.

Kuwait may be compared to Cyprus in terms of female shares. Severe! observations are noted. First, the percentage of female workers in the workforce of Kuwait s significantly below that of Cyprus. Second, in Cyprus females represent a definite majority in the specified women-dominated occupations. This is definitely not the case in Kuwait. Third, the percentage of females in male-dominated occupations is insignificant in Kuwait. Fourth, the hypothetical shares of the two countries match. Fifth, the actual shares of the Kuwait natives, not the total, match those of Cyprus

Until women have more occupational mobility, it is extremely unlikely that the pay differentials between female and male workers will be substantially reduced. Women would be much more evenly distributed throughout the occupational structure if equality of opportunity prevailed. This is illustrated in Figures 1 and 2. The 1980 hypothetical data show what percentage of women in each occupation would be, if, between 1970 and 1980, the new jobs created by growth and replacement needs of the economy were allocated to women on the basis of their total share in the labour force. The 13:87 ratio is used for illustrative purposes. The new occupational structure reflects a different distribution of job opportunities. Fairly large changes are evident. The proportion of women working as managers and administrators would increase to nine per cent for both natives and totals; their proportion of agricultural workers from 0.3 per cent (one per cent for natives) to 7. 9 per cent (10 per cent for natives), and their proportion of production workers would jump to 6.5 per cent. Their professional shares would drastically decline to less than 20 per cent and that of clerical employees to less than 10 per cent. It should be pointed out, however, that the Kuwaiti manpower distribution itself is an imperfect one due to the operation of the external effect. The massive infusion of foreign workers has generated a set of work preferences among natives that typically reflect " owners" attitudes. Native workers disassociate themselves from certain sectors and occupations — e.g. manufacturing, construction and sanitary services. Such attitudes are harmful from the perspectives of long-term domestic human resource development and self-reliance in the labour market. The evaluation of the desired distribution of the total Kuwaiti manpower, although of critical importance, is not examined here and the analysis proceeds on the basis of other things equal.

Wage Earnings by Sex: The Human Capital Context

The remainder of this article examines the earnings differential between men and women in Kuwait's labour market. In 1983 Kuwaiti men earned an average monthly salary of KD 390 (US $1,365). Women earned under two-thirds of this at KD 245. The earnings differential may reflect either productivity differences or discrimination (or choice). The source of the differential is important. If it arises from discrimination, then it implies an economically inefficient allocation of resources. But should the difference be explained by differences in productivity, then attempts to close the male-female earnings gap themselves would impair economic efficiency.

In order to examine the sources of male-female earnings differential we utilise the rich data set of the 1983 national labour survey which was conducted by the Central Statistical Office of the Ministry of Planning. The survey covered the entire waged workers and comprised 12,076 individuals representing about three per cent of the labour force. The sample contained information on variables such as monthly earnings, sex, age, marital status, education, years of job-tenure, employment in public or private sector industrial affiliation and type of occupation.

As our earlier discussion revealed, a large proportion of non-Kuwaiti (predominately Asian) women work as domestic servants. To avoid statistical biases that might arise from the clustering of Asian women in these menial jobs, the analysis below excludes all individuals who work as domestic servants. Non-Kuwaiti men are excluded from the analysis, while the Kuwaiti men are used as the reference group against which Kuwaiti, Arab and non-Arab women are compared. Therefore our subsample contains information on 3,677 individuals.

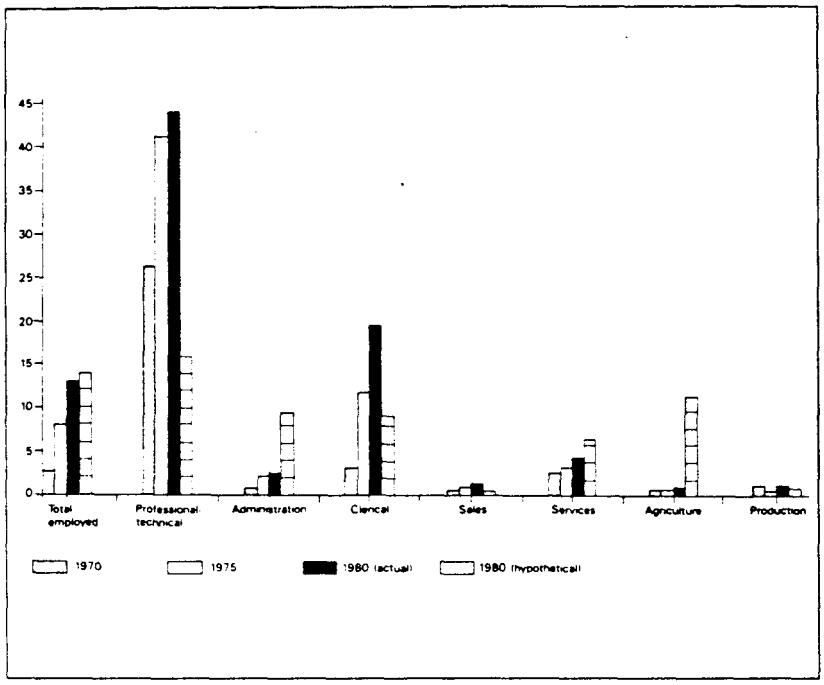

Figure 1.
Native Women as a Percentage of Native Total Employment in Major Occupations (1970, 1975, 19801.

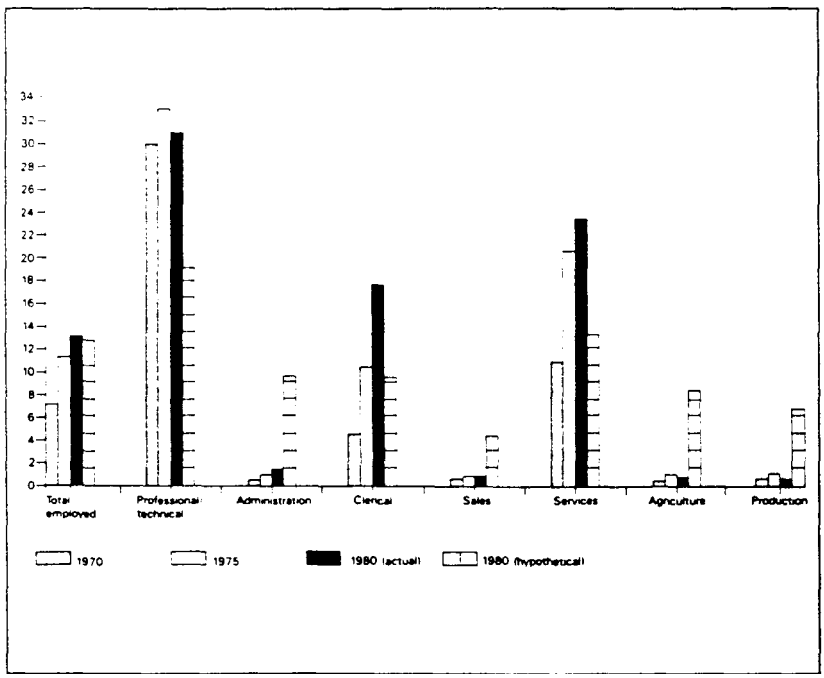

Figure 2.
Total Women as a Percentage of Total Employment in Major Occupations (1970, 1975, 1980)

The analysis of male-female earnings differentials is conducted utilising the human capital approach. According to the human capital approach, earning differences in the labour market are attributed to variations in such productivity-enhancing factors as the levels of education and work experience of participants. It follows, therefore, that workers with higher levels of these objective factors are expected to earn more than those individuals with relatively less education and experience. Within the context of this framework of analysis, wage differentials that cannot be accounted for are taken to imply the existence of non-objective determinants of earnings such as discrimination.

Following the conventional procedure suggested by Oaxaca[l] and Blinder[15], separate wage equations are estimated for each sex as follows:

$$Ln\ Y^M = \alpha^M + \sum_{j=1}^{n}$$

$$Ln\ Y^F = \alpha^F + \sum_{j=1}^{n}$$

where *Ln Y is* the natural logarithm of monthly wage earnings in Kuwaiti dinars, x represents a vector of productive characteristics, the /3s are their coefficients from the estimated wage equations, a is the constant term, and the superscripts M and F indicate males and females, respectively. From (1) and 12), the gross sex earnings differential $(Y^M - y^F)/y^F$ is approximated in logarithms by $Ln\ (Y^M/Y^F)$.

Evaluating (1) and (2) at the mean values for the characteristics, and then subtracting (2) from (1) yields:

$$Ln\ \bar{Y}^M - Ln\ \bar{Y}^F = (\alpha^M - \alpha^F) + (\Sigma\beta^M\bar{X}^M - \Sigma\beta^F\bar{X}^F) \quad (3)$$

The first term on the right-hand side of (3) represents the amount of the gross differential in salary between men and women that has not been explained by the regressions. The second term of the differential may be broken down into two components, one that comes from differences in endowments of the productive characteristics held by the two sexes, and a second that comes from differences in the way these characteristics are evaluated in the wage equations. This enables (3) to be rewritten as:

The second term on the right-hand side represents the advantage (or disadvantage) in endowments of the male group. The first and third terms represent the difference between how the high-wage (male) equation would evaluate the average characteristics of the low-wage (female group) and how the low-wage equation actually evaluates them.

The first and third terms are generally combined to measure "discrimination". It is important to note that this interpretation implies that all productive attributes that differ between men and women have been properly included in the estimation of the wage equations. Otherwise the "shift term" may well incorporate differences in unmeasured endowments of productive characteristics that are not properly called discrimination.

The analysis below uses the coefficients of two sets of specifications. The first includes direct productivity-generating characteristics and family structure as independent variables. These include years of schooling, years of potential experience (following Mincer[16] potential experience is defined as age — years of education — 6), derived according to the Mincer algorithm[16] years of job-tenure, defined as the length of time workers have been employed in their

Variable	Kuwaiti males	Kuwaiti females	Arab females	Non-Arab females
	7.800	13.000	13.200	11.600
Potential experience	18.900	8.700	13.300	15.700
Potential experience squared	527.000	136.100	272.900	342.500
Years of job-tenure	8.920	4.910	7.800	6.900
Years of job-tenure squared	132.800	38.800	93.300	81.600
Schooling ;< potential experience	101.100	91.000	145.900	147.400
Schooling x job-tenure	55.800	61.100	98.300	88.100
Family size	10.550	9.600	5.400	5.290
Employment in public sector	0.969	0.976	0.751	0.440
Married	0.774	0.569	0.728	0 860
Hours of work/month	163.200	135.800	150.900	175.500
Child < 6	0.474	0.254	0.437	0.438
Child 6-14	0.499	0.237	0.388	0.269
Logarithm of monthly wages	5.955	5.745	5.360	5 110
Sample size	2.332	535	651	159

Source Computed from the National Labour Survey sample, CSO. 1983

Note: Age structures of children are dummy variables which take a value of one if the labour participant has children of the indicated ages and zero otherwise

Table V.
Means of Human Capital and Family Structure Variables, 1953 Labour Survey Sample

Variable	Kuwait males	Kuwaiti females	Arab females	Non-Arab females
Constant	4.84356'	4.48822'	4.27508'	3.94426*
	1125.2121	(47.857)	147.5221	(13.658)
'(ears of schooling	0.05195'	0.08158'	0.06177'	0.0832C'
	(25.318)	(15.464)	(14.612)	(6.716)
Potential experience	0.01936'	0.00270'	0.00787	0.00679
	(6.844)	(0.433)	(1.486)	(0.397)
Potential experience squared	-0.00022'	0.00034'	- 0.00006	- 0.00027*
	(-4.786)	(2.156)	(-0.550)	(-0.759)
Job-tenure	0.03343'	0.02562'	0.05369'	0.06181'
	19.207)	12.129)	(6.851)	(2.914)
Job-tenure squared	-0.00067'	0.000029	- 0.00133'	-0.00125
	(-5.567)	(0.0411	1-4.1711	(-1.372)
Family size	0.00546'	0.00004	0.000018	-0.01774
	(3.821)	(0.014)	(0.003)	1- 0.9991
Marital status	0.19083'	-0.01638	-0.09085'	0.01428
(Married = 1)	(8.958)	(-0.520)	(-2.095)	(0.097)
Child < 6 years	0.10559'	0.05517	-0.05295	-0.15799'
	(5.977)	(1.491)	(-1.561)	(-1.627)
Child 6-14 years	-0.00658	-0.02809	-0.00116	0.07817
	(-0.357)	(-0.752)	1-0.032)	(0.780)
R-2	0.4442	0.4795	0.4706	0.6035
Sample size	2332	535	651	159

t-value in parentheses
' Significant at the five per cent level

Table VI.
Limited **Regression** Analysis **of** Earnings **of** Males and **Females** in Kuwait, **1983 !dependent** variable: natural logarithm of monthly earnings/

current occupations, marital status, family size and age women by pushing both wage and job discrimination structure of children. The focus of this, equation is into the unexplained residual. "unequal pay for equal productivity-generating characteristics". The use of these coefficients will The second specification augments this basic equation measure "total" potential discrimination against with variables for sector of employment (public versus

private), occupation and industry. The incorporation of these variables reorientates the focus to a second discrimination concept, "unequal pay for work of equal value"[17]. The inclusion of these variables may still understate the effects of wage discrimination, but the residual now measures wage discrimination with some precision.

The inclusion of family characteristics variables, namely family size, age structure of children, and marital status is based on Polachek[18] who suggests that child-rearing and traditional family responsibilities of women leads them to spend less time in the labour force than men. Over the life cycle, female labour force participation is expected to be intermittent and especially subject to disruption during a woman's child-bearing years. Polachek's empirical work establishes that the number and age structure of children and marital status are significant determinants of both male and female earnings.

The distribution of non Arab and Arab females across public and private sectors is more balanced than that of other workers

The above discussion suggests a further modification of the decomposition technique. Equation (4) presumes that the impact of each variable is in the same direction in both the male and the female earnings equations. That is, for example, additional years of education are expected to be associated with higher earnings for both males and females. However, the model presented by Polachek[18] predicts opposite signs for the family characteristics variables in the male and female equations. Therefore, partitioning the vectors of characteristics and coefficients into two, denoting the first subset to non-family characteristics by the subscript 1 and the second relating to family characteristics by the subscript 2, the earnings gap is appropriately decomposed as follows:

$$Ln\,\bar{Y}^M - Ln\,\bar{Y}^F = (\alpha^M - \alpha^F) + \Sigma\beta^{M1}(\bar{X}^{M1} - \bar{X}^{F1}) + (\bar{X}^{M2}\beta^{M2} - \bar{X}^{F2}\beta^{F2}) + \Sigma\bar{X}^{F1}(\beta^{M1} - \beta^{F1}) \quad (5)$$

In (5) the sum of the second and third terms on the right-hand side represents the difference in wages due to differences in wage-related characteristics. The first and fourth terms represent the portion of the wage gap due to differences in the estimated coefficients of the wage equation.

In the analysis below, the standard decomposition technique of (4) together with the modification suggested by Polachek (5), are utilised. Both limited and full regressions are employed. The limited regressions include human capital and family structure variables — education, experience, years of job-tenure, family size, marital status and age structure of children. This approach implicitly assumes that males and females are perfectly substitutable labour inputs. The full regressions, on the other hand, include additional variables particularly for industry and occupations. Therefore, the full regressions consider all forms of potential labour market discrimination, including occupational and industrial segregation[17].

Empirical Results

Human capital and family structure variable means for both sexes are shown in Table V. The results of the basic and expanded human capital models appear in Table VI and VII. The regression results of the basic model indicate that human capital traits are rewarded differently according to sex. The Chow tests performed pairwise on the individual earnings equations (e.g. Kuwaiti male vs. Kuwaiti female, Kuwait male vs. Arab female) result in the rejection of the equivalence of regression coefficients according to sex and nationality. (The computed F-values of the Chow-tests are 37.5, 207 and 105 for Kuwaiti men vs. Kuwaiti, Arab and non -Arab women respectively. These values are greater than the theoretical values[191.)

The explanatory power of the model is quite high, and is higher for females than for males. The returns to education are relatively higher for females than for males. Higher returns to education enjoyed by females might be accounted for by the interplay of the forces of supply and demand in the labour market. The supply of educated native females is thin relative to the demand for their services, particularly in the public sector where they are needed in teaching and clerical jobs. Moreover, because their labour force attachment is generally weak, those few that end up working for an extended period of time get to enjoy the benefits of promotional income in line with their seniority. By the same token, highly educated Arab and non-Arab females are in high demand to assume positions that need to be held by women as is the case with teaching in girls' schools. They accept employment according to well specified wage terms and earn more money relative to less educated Arab and non-Arab female workers whose supply is more elastic, and who typically work in low-paying jobs as secretaries or bank tellers.

A positive impact of job tenure on earnings reflects that actual years of job experience augments the earning profile of individuals. Work hours are generally positively related to wage earnings of labour participants. Marriage appears to have different earnings implications for men and women. For men, marriage may be a proxy for personal traits relating to the success in the work environment, such as stability and job attachment. For women, marriage seems to signal absenteeism and high turnover rates. As expected, the age structure of children has opposite signs in the male and female earnings equations. The age structure of children (under six years) is statistically significant at the five per cent level for Kuwaiti men only. Likewise, the family size variable is significant and positively correlated with earnings of Kuwaiti males.

The impact of the institutional practices explains the statistical significance of the family size variables. The government pays monthly child support income to males only. The national males receive about $90 per child, whereas the non-national male workers get half this amount. Careful examination reveals that the child support subsidy is regressive as the well-off nationals have larger families. A negative (but statistically not significant) sign for the non-national workers may imply

Variable	Kuwaiti . males	Kuwaiti females	Arab females	Non-Arab females
Constant	4.48321'	4.39179'	3.77872'	3.91186'
	(54.995)	(20.290)	(21.091)	(9.1981
Years of schooling	0.55000'	0.08136'	0.06800'	0.063203'
	(13.655)	(7.491)	(7.152)	(2.642)
Potential experience	0.02080'	0.01903	0.01976	0.01146
	(4.533)	(1.231)	(1.691)	(0.401)
Potential experience squared	- 0.00031 '	-0.00011	-0.00015	-0.00014
	(-4.4501	(-0.3951	(-0.833)	(-0.305)
Job-tenure	0.04523'	0.03102	0.04112'	0.02010
	(10.422)	(1.7811	(3.900)	(0.9681
Job-tenure squared	-0.00081'	0.00012	-0.00117'	-0.00123
	(-6.557)	(0.171)	(-3.678)	(-1.504)
Schooling x potential experience	0.00035'	-0.00047	-0.00055	-0.00056
	(1.498)	(-0.658)	(-1.1341	(-0.4961
Schooling x job-tenure	-0.00131'	-0.00063	0.00056	0.00238'
	(-4.560)	(-0.719)	(1.032)	(1.9031
Family size	0.00402'	0.00083	-0.00010	-0.00172
	(2.960)	(0.287)	(-0.018)	(-0.118)
Sector of employment (public =1)	0.23132	0.01432	0.16499'	0.58748'
	(5.068)	(0.140)	(4.567)	(6.764)
Marital status (married = 1)	0.17104'	0.00666	-0.04495	0.17850
	(8.442)	(0.216)	(-1.1231	(1 .3711
Hours of work	0.00064	0.00044	0.00075	0 00021
	(3.7251	(0.826)	(1.7461	(1.614)
Child < 6 years	0.09458'	0.06046	- 0.03204	-0.19478'
	(5.626)	(1.691)	(-1.040)	(-2.477)
Child 6-14 years	-0.00220	-0.03195	0.01546	0.05194
	(-0.127)	(-0.883)	(0.473)	(0.632)
Engineers[a]	0.26945'	-0.05188	0.28123'	0.85833
	(4.202)	(-0.272)	(2.579)	(2.006i
Medical doctors	0.29545'	0.13268	0 14452'	0.05475
	(2.523)	(1.850)	(2.936)	(0.510)
Economists/accountants/statisticians	0.02993	-0.01072	0.01811	0.25995
	(0.473)	(-0.117)	(0.253)	(0.894)*
Teachers	0.36223'	0.17443	0.52225	- 0 06878
	(2.635)	(1.787)	(1.736)	(-0.178)
Administrators	0.13524'	-0.18399	0.30653'	0.60536'
	(4.674)	(-1.376)	(2.814)	(2.3281
Clerical workers	-0.10039'	-0.11027'	-0.02468	0.22862
	(-6.144)	(-3.438)	(-0.701)	(1.831)
Mining/electricity/water[b]	0.18549'	0.74022	0.53617'	0.47722
	(6.316)	(4.306)	(4.175)	(1.860)
Manufacturing	(0.18526'	0.29743	0.35612'	0.50266'
	(5.270)	(0.950)	(4.135)	(2.540)
Trade	-0.17362'	-0.14146	0.36392'	0.65308
	(-2.439)	(-0.501)	(5.847)	(3.648)
Transportation	-0.01327	0.05082	0.21905'	0.23222
	(- 0.574)	(0.764)	(3.363)	(1.546)
Finance	0.26721	0.08789	0.44396'	0.67567'
	(5.049)	(0.833)	(7.667)	(4.205)
A^2	0.5026	0.5144	0.5738	0.7728
Sample size	**2332**	**535**	651	159

t-value in parentheses
' Significant at the five per cent level
(a) (reference group) is services occupation
lb) (reference group) is community, social and personal services sector.

***Table** VII.*

*Full Regression Analysis of Earnings of **Males and Females** in Kuwait, **1983** !dependent **variable:** natural logarithm of monthly earnings)*

that the more educated, and better paid ones tend to advantage is greater for non-Arab female workers than have smaller families than their less educated, low paid for other workers. The distribution of non-Arab and counterparts. Arab females across public and private sectors is more The public sector is revealed to pay an earnings balanced than that of other workers: whereas 43 and premium *over* the private sector for both sexes, but the 25 per cent of the respective non-Arab and Arab female

Description	Equation	Kuwaiti men vs. Kuwaiti women		Kuwaiti men vs. Arab women		Kuwaiti men vs. Non-Arab women	
		Logarithm	KD	Logarithm	KD	Logarithm	KD
Kuwaiti men average salary	$\Sigma\beta^M\bar{x}^M$	5.9649	390	5.9649	390	5.9649	390
Women average salary	$\Sigma\beta^F\bar{x}^F$	5.7395	311	5.3569	212	5.1069	165
Women salary, if paid according to men's pay structure	$\Sigma\beta^M\bar{x}^F$	5.9847	397	6.1315	460	6.0911	442
Overall salary difference	$Ln\ \bar{Y}^M - Ln\ \bar{Y}^F$	0.2254	79	0.6080	178	0.8580	225
Endowment difference	$\Sigma\beta^M(\bar{x}^M - \bar{x}^F)$	−0.0196	−7	−0.1665	− 70	−0.1261	− 52
Residual (discrimination)	$\Sigma\bar{x}^F(\beta^M - \beta^F)$	0.2450	86	0.7746	248	0.9842	277

Source: Derived from the basic equation (4) as applied to the limited regression model, Table VI.

Table VIII.
Decomposition of Earnings Differentials

Description	Equation	Kuwaiti men vs. Kuwaiti women		Kuwaiti men vs. Arab women		Kuwaiti men vs. Non-Arab women	
		Logarithm	KD	Logarithm	KD	Logarithm	KD
Kuwaiti men average salary	$\Sigma\beta^M\bar{x}^M$	5.9649	390	5.9649	390	5.9649	390
Women average salary	$\Sigma\beta^F\bar{x}^F$	5.7395	311	5.3569	212	5.1069	165
Women salary, if paid according to men's pay structure	$\Sigma\beta^M\bar{x}^F$	5.9512	384	6.0738	434	6.0262	414
Overall salary difference	$Ln\ \bar{Y}^M - Ln\ \bar{Y}^F$	0.2254	79	0.6080	178	0.8580	225
Endowment difference	$\Sigma\beta^M(\bar{x}^M - \bar{x}^F)$	0.0137	6	−0.1089	− 44	−0.0613	− 24
Residual (discrimination)	$\Sigma\bar{x}^F(\beta^M - \beta^F)$	0.2117	73	0.7169	222	0.9193	249

Source: Derived from the basic equation (4) as applied to the full regression model, Table VII.

***Table** IX.*
Decomposition of Earnings Differentials

workers are employed in the public sector, the corresponding figures for Kuwaiti males and females are 92 and 97 per cent respectively. These ethnic variations in the sectoral distribution of employment, together with variations in the public versus private sector pay structures explain the results regarding the size and statistical significance of the sector of employment variable. (Public sector employees enjoy higher wages to those of measurably equivalent workers in the private sector[20].)

Relative to the service occupation, participation in scientific/professional, managerial and administrative occupations is positively associated with the earnings of Kuwaiti men, as well as Kuwaiti Arab and non-Arab women. The signs of these occupations are positive and their statistical significance can be generally ascertained for these groups. Mining/electricity, manufacturing and financial industries appear to be positively correlated with the earnings of male and female workers. The earnings profile of Kuwaiti men is steeper relative to the earnings profiles of groups of women.

Table VII(is developed from the coefficients of the basic model and reports the results of the decomposition analysis of (1) to (4), set out above. We find that out of total earnings differentials between Kuwaiti men and women, 0.225, in the logarithm term or KD 79/mo, nearly 8.7 per cent is diminished by the higher productive endowments which Kuwaiti women have relative to Kuwaiti men, and 108.7 per cent is due to unexplained variables including discrimination. The earnings differentials portion due to endowments reflects the higher educational attainment of Kuwaiti women. The remaining larger differentials, 108.7 per cent of the two groups of workers measures "total" discrimination against women, that is, the combined effect of wage and job discrimination against Kuwaiti women.

The decomposition analysis also shows that Arab women have superior endowments relative to Kuwaiti men. As Table V indicates, the average years of schooling for Kuwaiti men is 7.80, which is much lower than the corresponding average among Arab women, 13.20.

Higher productive endowments mitigate the earnings edge that Kuwaiti male workers have over Arab women. About 27.4 per cent of the total earnings differentials between Kuwaiti men and Arab women is

Description	Equation	Kuwaiti men vs. Kuwaiti women		Kuwaiti men vs. Arab women		Kuwaiti men vs. Non-Arab women	
		Logarithm	KD	Logarithm	KD	Logarithm	KD
Kuwaiti men average salary	$\Sigma\beta^{M}\bar{x}^{M}$	5.9649	390	5.9649	390	5.9649	390
Women average salary	$\Sigma\beta^{F}\bar{x}^{F}$	5.7395	311	5.3569	212	5.1069	165
Women salary, if paid according to men's pay structure	$\Sigma\beta^{M}\bar{x}^{F}$	5.7963	329	5.8298	340	5.7225	306
Overall salary difference	$Ln\ \bar{Y}^{M} - Ln\ \bar{Y}^{F}$	0.2254	79	0.6080	178	0.8580	225
Endowment difference	$\Sigma\beta^{M_1}(\bar{x}^{M_1} - \bar{x}^{F_1})$						
	$+ \Sigma\beta^{M}{}_{2}\bar{x}^{M}\Sigma\beta^{F}{}_{2}\bar{x}^{F}{}_{2})$	0.1686	61	0.1351	50	0.2424	84
Residual (discrimination)	$(\alpha^{M} - \alpha^{F}) + \Sigma\bar{x}^{F_1}$						
	$(\beta^{M_1} - \beta^{F_1})$	0.0568	18	0.4729	128	0.6156	141
Percentage difference due to		(%)		(%)		(%)	
(a) Basic endowments		− 37.7		− 34.1		− 16.2	
(b) Family structure		112 7		56.0		44.5	
(c) Residual		25 0		78.1		71.7	

Source: Derived from the basic equation (5) as applied to the limited regression model, Table VI.

Table X.
Decomposition of Earnings Differentials

offset by the superior productive endowments possessed by the latter group The residual difference, "27.4 per cent, is due to discrimination in favour of Kuwaiti men. By the same token, nearly 115 per cent of the total earnings differentials between Kuwaiti males and non-Arab female workers is accounted for by discrimination. The better productive endowments possessed by non-Arab female workers reduce the total earnings differentials by 15 per cent.

What is of particular interest for Kuwait is the result that we obtain from the residual (see row 6, Table IX) that is, the earnings differentials that remain even after we correct for occupational and industrial affiliation. As expected, this residual fraction is generally higher in the basic model than in the expanded model because the expanded model explains more of the endowment differences. This result therefore corroborates the hypothesis that earnings discrimination against Kuwaiti, Arab and non-Arab women persist even when the model controls, with some precision, for the type of occupation.

When the vectors of characteristics and coefficients are partitioned into two, corresponding to non-family and family characteristics respectively, the following results are revealed from decomposing the earnings differentials according to the "limited" and "full" regressions. The decomposition results of the "limited regressions" model are presented in Table X. The table entries show the percentage of the differential in earnings that arises from the coefficients and endowments according to (5). As the Table illustrates, nearly 112.7 per cent of the total wage difference between Kuwaiti men and women, in the case of the "limited regression", is associated with the family characteristics variables, namely marital status, family size and age structure of children. This advantage which accrues to Kuwaiti men is mitigated by the superior non-family characteristics (basically education) which Kuwaiti women possess, i. e., by 37.7 per cent. The combined effects of family and non-family productive characteristics is, therefore, 75 per cent and thereby the unexplained residual component contributes 25 per cent to the earnings difference between these two groups.

The contribution of family characteristics to the difference in earnings between Kuwaiti men and the groups of Arab and non-Arab women is a sizeable 56 and 44 per cent respectively. Non-family characteristics reduce the gap by 34.1 and 16.2 per cent respectively. Therefore, the unexplained residual or discrimination contributes 78 and 72 per cent of the difference: in earnings between Kuwaiti men and Arab and non-Arab women respectively.

In the "full regressions" which incorporate occupation and industry variables, the contribution of family structure to the male-female earning differences remains substantial and favours men. But its impact is discernibly reduced by the contribution of non-family characteristics, notably education (Table XII. Dominating the Table, however, is the impact of the unexplained or residual component. That is, nearly one-third of the differences in earnings between Kuwaiti men and Kuwaiti women is due to the unexplained portion which presumably measures discrimination. The residual component is even larger in the earnings differences of Kuwaiti men relative to Arab and non-Arab women, i.e. 80 and 92.6 per cent respectively.

Description	Equation	Kuwaiti men vs. Kuwaiti women		Kuwaiti men vs. Arab women		Kuwaiti men vs. Non-Arab women	
		Logarithm	KD	Logarithm	KD	Logarithm	KD
Kuwaiti men average salary	$\Sigma\beta^{M}\bar{x}^{M}$	5.9649	390	5.9649	390	5.9649	390
Women average salary	$\Sigma\beta^{F}\bar{x}^{F}$	5.7395	311	5.3569	212	5.1069	165
Women salary, if paid according to men's pay structure	$\Sigma\beta^{M}\bar{x}^{F}$	5.8113	334	5.8461	346	5.9014	366
Overall salary difference	$Ln\ \bar{Y}^{M} - Ln\ \bar{Y}^{F}$	0.2254	79	0.6080	178	0.8580	225
Endowment difference	$\Sigma\beta^{M_1}(\bar{x}^{M_1} - \bar{x}^{F_1})$						
	$+ \Sigma\beta^{M_2}\bar{x}^{M} \Sigma\beta^{F_2}\bar{x}^{F_2})$	0.1535	56	0.1188	44	0.0635	24
Residual (discrimination)	$(\alpha^{M} - \alpha^{F}) + \Sigma\bar{x}^{F_1}$						
	$(\beta^{M_1} - \beta^{F_1})$	0.0718	23	0.4892	134	0.7945	201
Percentage difference due to		(%)		(%)		(%)	
(a) Basic endowments		− 20.0		− 31.0		− 9.3	
(b) Family structure		88.2		51.0		16.7	
(c) Residual		31.8		80.0		92.6	

Source: Derived from the basic equation (5) as applied to the full regression model, Table VII.

Table XI. Decomposition of Earnings Differentials

The above results clearly indicate that family structure variables, viz., marriage, family size and age structure of children, are generally significant and positively associated with the earnings for men but not for women. They also reveal that the traditional division of labour between men and women within the family produces weaker labour force attachment and shorter work experience for women. Therefore, the modification suggested by Polachek[18] is illuminating in understanding the male-female earnings differences particularly in a traditional developing society like Kuwaitis.

It may be argued, however, that the traditional sex roles and the division of labour itself between men and women in the family is the product of market discrimination against women. In other words, the weaker attachment of women may be due to their lower earnings which, in turn, reflect labour market discrimination to some unknown degree.

Hence, some portion of the earnings gap "explained" by differences in work experience represents an indirect but important potential effect of labour market discrimination[21]. If this argument is correct, then the explained and unexplained components of the "limited" and "full" regressions suggested by the results of the standard decomposition technique of equation (4), Tables VIII and IX measure with more precision the relative order of magnitude of these components.

The above findings indicate that male Kuwaitis receive a constant premium over the earnings of females. Men have more experience, and have a higher probability of being married and are concentrated in the higher paying occupations. The residual (unexplained) earnings gap may be attributed to discrimination. However, the premium appears to vary according to the "ethnicity" of the female. That is, there appears to be more discrimination against non-Arab than Arab women who in turn suffer more discrimination relative to Kuwaiti women. These findings, therefore, corroborate earlier empirical work on discrimination according to ethnic background[20,22]. Thus it is clear that Kuwait's labour market is segmented along sexual and ethnicity lines. These results also indicate that even when women have higher educational attainment, their earnings are still less than men. Despite apparent equality in the educational opportunity for both sexes, women's position in Kuwait's labour market is not equal to men. Equality of education may be a necessary condition, but it does not appear to be a sufficient condition for equality of pay.

The preceding decomposition analysis is subject to important caveats. First, the evidence presented here does not enable us to reach any conclusions about the quality of education and innate abilities of the four groups. Second, the technique assumes that the proxies of productivity differences *(X)* are adequate and exhaustive. If the X vector does not exhaust all possible productivity-related factors, then there may be omitted variable bias. It is necessary to remember that the component identified as discrimination contains unexplained differences in the constant terms. It is prudent to be somewhat reluctant to call all differences " discrimination" until we are sure that they contain no remaining unidentified differences in productive characteristics. A further deficiency of the decomposition technique is that it ignores questions concerning the cause of any underlying differences in characteristics. Thus, the feedback effects of labour

Variable	Professional/ scientific	Administrative/ managerial	Clerical	Services
Constant	4.66831'	4.331 17'	4.97882'	4.49547'
	(57.989)	(12.180)	(71.465)	(53.635)
Years of schooling	0.07156'	0.10096'	0.05858'	0.04232'
	(17.518)	(5.812)	(15.759)	(11.848)
Potential experience	0.01540'	0.04051 '	0.01899'	0.01419'
	(3.754)	(2.070)	(4.701)	(3.480)
Potential experience squared	- 0.00004'	- 0.00016	- 0.00006	- 0.00024'
	(-0.392)	(-0.397)	(-0.723)	(-3.853)
Job-tenure	0.02264'	0.04328'	0.03228'	0.05506'
	(3.874)	(1.9091	(5.537)	(12.039)
Job-tenure squared	- 0.00035	- 0.00113	-0.00068'	- 0.00121
	(- 1.576)	(- 1.235)	(-3.129)	(-7.934)
Family size	0.00198	0.01979	0.00342	0.00561
	(0.839)	(1.406)	(1.5361	(2.7451
Sector of employment (public = 1)	0.16170'	-0.31278'	-0.17536'	0.50168
	(-4.8241	(-2.972)	(-4.706)	(8.574)
Marital status (married= 1)	0.02855'	0.07116	0.05781'	0.20339
	(1.161)	(0.338)	(2.374)	(8.069)
Kuwaiti females	- 0 19858'	- 0.70055'	- 0.29016'	- 0 50199'
	(-7.516)	(-2.120)	(-10.810)	(-10.315)
Aʳab females	-0.77028'	- 0.47930'	- 0 65756	- 0 98043'
	(-27.316)	(-3.008)	(-19041)	(-28.668)
Non-Arab females	- 0.79771'	-0.66480'	-0.67239'	- 1 18475'
	(-18.575)	(-2.6831	(-10.800)	(-17.730)
R^2	0 5691	0.6377	0.5369	0.7420
Sample size	1254	177	1075	1171

-value *in* parentheses
' Significant at the five per cent level

Table XII.
Estimates of Log Wage Equations by Occupational Groups, Kuwait, 1983

market discrimination on the acquisition of human capital is neglected. Because of these caveats, the wage decomposition technique should be viewed as providing only a broad indication of the basis of pay differences.

The analysis was extended by the separate estimation of wage equations (including a sex dummy variable) by broad occupational groupings. The statistical test was restricted to four groups of occupations which account for over 90 per cent of female employment. These occupations are scientific/professional/technical occupations; administrative/management occupations, clerical and service occupations which correspond to four of the major groups in the International Standard Classification of Occupations (ISCO). A firm conclusion regarding the extent of labour market discrimination in the left-out occupations, - e.g. agriculture, sales and production workers - is plagued by statistical quirks due to the small number of observations in these occupations.

Data points on native males, native females, Arab and non-Arab females were combined and the parameters of an earnings equation with appropriate interactive dummy variables for sex and nationality were estimated. The results of this exercise are reported in Table XI(.

Because the dependent variable in these earnings equations by occupations is expressed in natural logarithms, the coefficients of the sex and ethnicity dummy variables and their respective variances may be used to estimate the percentage of the earnings advantage that Kuwaiti men have relative to the three groups of women within each occupation. This procedure correctly interprets the extent of the male earnings advantage in the semi-logarithmic equations[23].

An examination of the dummy variable coefficients and their respective variances suggests sizeable differences in wage earnings between occupational groups because of discrimination between the sexes. Table XIII presents the results of the corrected estimation of the sex and ethnicity disparity in earnings within the broad occupational groups.' Native males are expected to earn about 18 per cent more than native female workers in professional and scientific occupations. There appears to be wage discrimination up to 25 per cent in clerical jobs, 48 per cent in administrative jobs, and 39 per cent in service occupations. These differences may represent differences in the distribution of job specifications within each occupation. The signs

'The dummy variables take the value 1 if the individual is a member of the indicated group and zero otherwise. If c is the estimated coefficient of the dummy variable, the percentage advantage of the dummy variable in earnings is computed as $\{\exp[\hat{c} - \frac{1}{2} V(\hat{c})] - 1 \times 100\%$, where $V(\hat{c})$ is the variance of $\hat{c}$[23].

	Professional/ scientific occupations	Administrative/ managerial occupations	Clerical occupations	Service occupations
Ia) Kuwaiti women	– 17.9	– 47.6	– 25.2	– 39.3
Ib) Arab women	– 53.7	– 37.3	– 48.2	– 62.5
(c) Non-Arab women	– 54.9	– 46.9	– 48.9	– 69.3

Source: Derived from Table X((utilising Kennedy's procedure[23]

Table XIII.
Women Earnings Disadvantage Relative to Kuwaiti Men According to Broad Occupational Groups (%)

of the non-native female dummy variable corroborate the previous results regarding the varying intensity of sex discrimination according to ethnic background. Discrimination against native females is less intense than against Arab females which in turn is milder than the discrimination-intensity against non-Arab females. For example, Arab females are expected to earn 54 per cent less than the earnings of native males in professional and scientific occupations, 48 per cent in clerical occupations, and 63 per cent in service occupations. By contrast, non-Arab females are expected to earn 55 per cent less than native males in professional and scientific occupations, 49 per cent in clerical occupations and 69 per cent in service occupations.

Conclusions

The statistical results of the regression models and the discrimination analysis are quite explicit about the varying levels of discrimination intensity that alternative groups are subjected to. Relative to Kuwaiti men, female Kuwaitis are paid lower wages. The wages differential is only partially explainable by differences in human capital attributes; the residual is due to other factors including discrimination. The level of discrimination levied against Arab females is more intense than that experienced by Kuwaiti females but is less than the discrimination practised against non-Arab females. In addition to sex and nationality the occupational clustering of non-Arab females in low-paying menial service occupations acts to accentuate the overall wage gap. Improvements in the occupational and pay structures require concerted personnel actions on the part of the government as a model employer. From a developmental point of view the above analysis points to the need to design supportive policies and extension activities which encourage women to enter new occupations besides the traditional stereotyped ones. The government may well want to look carefully at legislation to redress the wage discriminatory practices against women as a partial means of encouraging them to participate in various activities of the labour market.

References

1. Oaxaca, R., "Male-Female Wage Differentials in Urban Labor Markets", *International Economic Review,* Vol. 14, 1973, pp. 693-709.
2. Malkiel, B.G. and Malkiel, J.A., "Male-Female Pay Differentials in Professional Employment", *American Economic Review,* Vol. 63, 1973, pp. 693-705.
3. Filer, R., "Sexual Differences in Earnings: The Role of Individual Personalities and Tastes", *The Journal of Human Resources,* Vol. XVII No. 1, 1983, pp. 82-90.
4. Organization for Economic Co-operation and Development (OECD), *The Integration of Women into the Economy,* Paris, 1985.
5. House, W.J., "Occupational Segregation and Discriminatory Pay: The Position of Women in the Cyprus Labor Market", *International Labor Review,* Vol. 112, 1983, pp. 75-93.
6. Gannicott, K., "Women, Wages and Discrimination. Some Evidence from Taiwan", *Economic Development and Cultural Change,* 1986, pp. 721-30.
7. Central Statistical Office (CSO), Ministry of Planning, Microdata of the Labor Force Survey, Kuwait, 1983.
8. Allaghi, F. and Almana, A., "Survey of Research on Women in the Arab Gulf Region", in *Social Science Research and Women in the Arab World,* Frances Pinter Publishers, Unesco, Paris, 1984.
9. Central Statistical Office (CSO), Ministry of Planning, Annual Statistical Abstract, Kuwait, 1985.
10 Meleis, Al., ."Effect of Modernization on Kuwaiti Women", *SOC.Sci.Med. Vol.* 16, 1982, pp. 965-70.
11 Central Statistical Office (CSO), Ministry of Planning, Population Census of 1985, Kuwait, 1986.
12. Bahry, L., "The New Saudi Women: Modernization in an Islamic Framework", *The Middle East Journal,* Vol. 36 No. 4, 1982, pp. 502-15.
13. Abu Nasr, J., Khory, N. and Azzam, H. (Eds.), *Women Employment and Development in the Arab World,* Mouton, Berlin, 1985.
14. United Nations Economic Commission for Europe (ECE), *The Economic Role of Women in the ECE Region,* New York, 1980.
15. Blinder, A., "Wage Discrimination' Reduced Form and Structural Estimates", *Journal of Human Resources,* Vol. 3 No. 4, 1973, pp. 436-55.
16. Mincer, *J., Schooling, Experience and Earnings,* National Bureau of Economic Research, New York, 1974.
17. Shapiro, D. and Stelncer, M., "Male-Female Earnings Differentials and the Role of Language in Canada, Ontario and Quebec, 1970", *Canadian Journal of Economics,* Vol. 14, 1981, pp. 341-8.
18. Polachek, S., "Potential Biases in Measuring Male-Female Discrimination", *Journal of Human Resources,* Vol. 23, 1975, pp. 223-44.
19. Chow, G., "Test of Equality between Sets of Coefficients in Two Linear Regressions", *Econometrica,* Vol. 28, 1960, pp. 591-605.
20. Shah, N. and Al-Qudsi, S., "Changing Characteristics of Migrant Workers in Kuwait", presented at the Annual Meeting of Population Association of America held at Chicago, April 30-May 20 1987, (forthcoming in *International Journal of Middle East Studies,* Vol. 21 No. 1, February 1989).
21. Daymont, T. and Andrisami, P., "Job Preferences, Colleges Major and the Gender Gap in Earnings", *Journal of Human Resources,* Vol. 19, 1984, pp. 408-28.
22. Al-Qudsi, S.A., "Earnings Differences in the Labor Market of the Arab Gulf States: The Case of Kuwaiti", *Journal of Development Economics,* Vol. 18, 1985, pp. 119-32.
23. Kennedy, P, "Estimation with Correctly Interpreted Dummy Variables in Semilogarithmic Equations", *American Economic Review,* Vol. 71, 1981, pp. 801.