

# Discrimination by gender in Morocco's urban labour force : evidence and implications for industrial and labour policy wage

## 1. Background

### The feminization of export production

Over the years, the feminization of export production has been an issue of considerable debate in the gender and development field (Elson and Pearson, 1981 ; Lim, 1990 ; Baden and Joekes, 1993 ; Pearson, 1998). The secular rise in female labour force participation globally in recent decades (Joekes, 1987 ; UN, 1995), concentrated particularly in the export sector of newly industrializing economies, has also caught the attention of development economists interested in trade and labour issues. Reviewing global evidence on employment trends by gender, some studies have argued that there is a link between the feminization of the labour force and the increasing casualization and flexibilization of employment (Standing, 1989 ; 1996). Others have explored the correlation between rising female intensity of employment in export industries and trade performance, the extent to which trade performance is related to human capital endowments and the possible relationship between investment in female education and trade performance (Wood, 1991 ; Berge and Wood, 1994).

Feminist studies, on the other hand, have been particularly concerned with what, if any, benefits are conferred on women workers in this process of incorporation into the global labour market, and whether this newly incorporated labour force is subject to specific, gendered forms of discrimination and exploitation (Elson and Pearson, 1981). They have also been concerned with the impact of women's employment in export-oriented industry on gender relations ; on whether such employment provides women with greater autonomy and choice, or merely reproduces a new variant of patriarchal gender relations (see, for example, Greenhalgh, 1985 ; Kabeer, 1995).

### Labour markets and gender discrimination

Since the mid-1980s, a considerable theoretical and empirical literature on labour markets and discrimination (by gender and other variables) has

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emerged based on studies of developing country labour markets. These come from a range of perspectives, including neoclassical (Appleton et al., 1990 ; Birdsall and Sabot, 1991 ; Psacharopolous and Tzannatos, 1992 ; Hotchkiss and Moore, 1996 ; Glick and Sahn, 1997) as well as institutional and feminist viewpoints (Humphrey, 1987 ; Sinclair and Redclift, 1991 ; Terrell, 1992).

These studies have provided a wealth of evidence on the extent of the male-female wage gap in different contexts ; the degree to which this can be attributed to “discrimination” ; and on other mechanisms of discrimination in labour markets. The range of estimates of male-female wage differentials varies between countries, sectors and time periods. For example, studies in Ashenfelter and Oaxaca (1991: 43-47) report earnings differentials from as low as 27 percent (Brazil, formal sector) to as high as 85 percent (Nicaragua, national). Hotchkiss and Moore (1996: 671) find a gross earnings differential of around 20 percent for Jamaica. Terrell (1992: 393) reports female earnings as a percentage of male at between 47 percent and 87 percent, for a variety of Latin American countries. The proportion of these differentials that is thought attributable to discrimination (rather than differences in endowments) is also highly varied, ranging between 10 percent and over 100 percent, depending on country, sector etc., with many estimates falling in the 60+ percent range (Ashenfelter and Oaxaca, 1991: 47 ; Psacharopolous and Tzannatos, 1992 ; Terrell, 1992).

These studies have also resulted in new insights regarding the limitations of conventional labour market models in explaining gender discrimination in the developing country context, as well as highlighting methodological difficulties. One particular problem in the neoclassical approach is the difficulty in distinguishing empirically the effects of discrimination from the “preferences” of employees. For this reason, the upper limit of discrimination is often identified as the residual, unexplained wage differences.

One overall conclusion is that there is no universal explanation for gender discrimination in wages linked to economic development (Ashenfelter and Oaxaca, 1991: 52). Regional differences in the extent to which “traditional roles” have influenced male-female job access and productivity have been highlighted (Schultz, 1991). Some studies suggest that wage discrimination per se is less important in developing countries than in developed industrialized economies, whereas access to jobs or barriers to entry in particular sectors may be more important (Appleton et al., 1990 ; Hotchkiss and Moore, 1996). The relatively high proportion of the labour force, and particularly women, in informal sector or self-employment in developing economies is often a more important factor in explaining wage differentials than is pure discrimination. The question of whether wage differentials are likely to increase or decrease with development has also been raised, although studies are inconclusive on this. Some (e.g. Tzannatos, 1995) suggest a closing of the formal sector wage gap in developing countries, although this view

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has been criticized for not taking into account changes in human capital differences (Joeques, personal communication).

The causes of wage discrimination are also discussed in some of these studies, highlighting monopsonistic and segmented labour markets and imperfect information as underlying factors. The efficiency and equity impacts of wage discrimination are also stressed in a number of dimensions : In sum, discrimination will tend to slow economic growth by reducing efficiency in the allocation of labour among firms and the economy by reducing job commitment and the effort of workers who perceive themselves to be victims of injustice ; and by reducing the magnitude of investments in human capital, and the returns on those investments (Birdsall and Sabot, 1991: 7).

### **Objectives and structure of the study**

The current study straddles these somewhat disparate literatures. It is innovative in attempting to link the issue of wage discrimination to trade performance and competitiveness. It argues that the low-wage export strategy based on female labour that has been pursued in Morocco needs to be rethought if Morocco is to maintain its market share in export textiles in the global economy. This is a challenge to a common view that wages are too high in Morocco to compete with new entrants such as China, Vietnam and India.

To develop this argument, the paper uses data from urban labour force surveys to estimate the extent of gender-based wage discrimination. It also attempts to identify the main determinants of gender-based wage differentials. Drawing on this empirical analysis, it hypothesizes a link between the declining competitiveness of Moroccan industry, declining productivity and gender discrimination in wages. It concludes with policy proposals, which are designed to redress gender-based wage discrimination, thereby, it is argued, improving productivity, and, by extension, the competitiveness of Moroccan industry.

Section 2 provides the overall macroeconomic context for the study, covering the period 1980-1993 and focusing on the competitiveness of Moroccan industry. The third section gives an overview of employment trends in the same period while the fourth specifically examines the feminization of manufacturing employment. The fifth section provides some data on wage differences by gender in urban labour markets. Theoretical explanations for wage discrimination by gender are reviewed (section six) and then the methodology and results of the analysis of wage discrimination undertaken in Morocco are presented (section seven). These results are analyzed in some detail in section eight, which identifies the factors explaining differences in wage levels by gender, as well as wage differentials, in urban Morocco. Section nine draws together policy conclusions and suggests fruitful areas for further research.

## 2. Economic performance and policy in Morocco, 1980-1993

The background to this study is a broad concern with the long-term competitiveness of Moroccan industry, as structural adjustment (introduced in 1986) and increasing deregulation are pushing the country towards greater integration in the global economy.

Following structural adjustment, Morocco's trade performance was initially strong and its share of world markets grew up to 1988. Since 1988, competitiveness has declined, as reflected in rising trade deficits, a falling share of world markets overall and a falling export-import ratio after 1988.

In 1981 (before adjustment), the trade deficit was equivalent to 19 percent of GDP, falling to 5 percent in 1988, and rising again to 10 percent in 1994. While the devaluation of the Dhiram associated with the adoption of a structural adjustment programme in 1986 initially supported the positive trade performance, in the longer-run, structural adjustment has not led to a sustained improvement in trade indicators.

Growth in exports has slowed and imports have risen rapidly. Between 1980 and 1988, the growth rate for exports was 4.71 percent annually. Between 1988 and 1993, this fell to 2.07 percent. Over the same period, import growth rose from 1.72 percent annually to 7.21 percent. Alongside the loss of international competitiveness, there has been a loss of competitiveness in the domestic market, with foreign producers being the main beneficiaries of increases in domestic demand (Belghazi, 1995a).

Improvements in the current account in the period 1982-1993 (1) were largely due to revenues accrued from tourism and remittances of migrant workers, sources that may be unreliable in the longer term. Pressure on the current account is compounded by the rising burden of debt repayment following rescheduling in 1993. Although the current account deficit was financed by a massive increase in foreign private investment, there are concerns that unless there is significant domestic investment alongside this, the economy will remain highly vulnerable.

Compared to other newly industrializing countries, Morocco's competitive advantage is concentrated in final consumer goods and semi-manufactured goods, particularly in semi-conductors, electronics, textiles and clothing. Analysis of the trends in global market share for different products in the 1980s and early 1990s reveals a number of trends. From 1978 to 1985, there was a decrease in market share for industries based on natural resources (food, beverages, minerals and metals), offset by a rising market share of chemical products and textiles and clothing, although these represent a much smaller share of world markets. Overall, the global market share in major exports fell in the early 1980s, then rose again in the second half of the 1980s (following structural adjustment), only to fall again subsequently. While the overall picture is one of loss of competitiveness, a microeconomic perspective gives greater cause for optimism, because of increased diversification of production. Furthermore,

(1) The deficit in the balance of payments current account fell from 12.9 percent of GDP in 1982, to 2 percent of GDP in 1993 (Belghazi, 1995: 3).

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in some sectors, the market share has continued to rise, particularly in clothing and electronics, both sectors with a high representation of women in the labour force.

Because of their labour-intensive nature, the profitability of export industries is highly sensitive to wage costs (Baden and Joeques, 1993). Belghazi (1995a) finds a higher share of wages in value-added in enterprises that export a high proportion of their turnover, compared to those exporting a lower percentage. It is argued here that this is closely linked to the trend of female labour being drawn into export manufacturing, under conditions of increasing global competition.

### 3. Overall Employment Profile and Trends (2)

Over the past ten years or so, there has been an increase in the overall labour supply in Morocco, due to a combination of factors, including changes in the family economy leading to increases in female labour force participation, population growth and the stagnation in labour opportunities for overseas migrants. Labour force growth has outstripped the supply of formal employment, leading to increased activity in the informal sector. While labour absorption in the household and informal economies has reduced pressure on the labour market, it may have negative implications for fiscal revenues, for industrial productivity and hence competitiveness.

Between 1985 and 1993, the economically active population in Morocco increased by 0.8 percent annually in rural areas and 3.8 percent in urban areas, faster than population growth in both cases (at 0.4 percent and 3.4 percent respectively). This is due to the age structure of the population as well as rural-urban migration.

Overall, the size of the urban male labour force has increased faster than that of the female labour force (by 5.14 percent per annum 1986-1993, compared to 3.05 percent for women). In 1993, 22.1 percent of the urban female population over 15 was recorded as working compared to 73.1 percent of the urban male population over 15 (3). Overall, the education level of the urban labour force is higher for women than men.

If the workforce over 15 is used as the reference population, data indicate that the urban economically active population has either stagnated (for men) or fallen (for women) in the period 1986-1993 (see Table 1 below). Including the active population under 15 alters the picture such that the active population increased for men but not women (crude activity rate). There has been a sharp decline in the percentage of the working female population under 15 in urban areas (falling by nearly nine percent per year, 1986-1993), possibly related to improved schooling opportunities, to informalization of employment among women (where official data do not capture this adequately) or to a "discouraged worker" effect among young women.

(2) Data used in this study originate for the national urban employment surveys (ENPAU), which cover both formal and informal sectors. The rural population is not covered.

(3) This is based on official statistics which may have gender biased definitions of what constitutes work and /or produce gender bias in the data collection procedures. It has been reported from elsewhere in the Arab states that women who are working may not define themselves as doing so (Anker and Dixon Mueller, 1988).

Table 1  
**Urban economic activity and unemployment rates by gender,  
 1986 and 1993 and average growth rates 1986-1993**

	1986 (percent)		1993 (percent)		Average growth rate 1986-1993 (percent)	
	Male	Female	Male	Female	Male	Female
Activity rate (over 15)	73.1	23.7	73.1	22.1	0.00	- 0.99
Crude activity rate	40.26	12.69	42.87	11.84	0.90	- 0.98
Unemployment rate	13.9	20.4	14.2	21.7	0.31	0.89

Source : Belghazi, 1995b: 34.

(4) The measurement of unemployment and underemployment, by gender, is beset with difficulties. Women are often less likely to report as unemployed. Definitions of underemployment (here – working less than 32 hours per week) are somewhat arbitrary and tend, by definition to be higher for women who devote less time to paid work because of domestic responsibilities.

(5) The data from this table on unemployment and education levels shows a decline in total unemployment rate from 19.9 percent in 1985 to 15.9 percent in 1993 (Belghazi, 1995a). This is inconsistent with earlier statements and other reported data sources, see e.g. Table 1.

(6) No trend data were available on underemployment by gender.

### Trends in unemployment and underemployment (4)

Unemployment rates are higher (by 50 percent – see Table 1) among women than men in Morocco and this is particularly pronounced in urban areas, where the female rate is almost twice the male rate. Unemployment has also risen faster for women than men (0.89 per annum compared to 0.31 percent, 1986-93) (see table 1). However, the reverse is true among the unemployed who have never had a job, i.e. the unemployment rate is rising faster for men than women among new entrants.

Data on unemployment by educational level shows rising unemployment among qualified wage earners, including those with middle level education (up from 21.3 percent in 1985 to 24.6 percent in 1993) and especially those with higher education (up from 8.3 percent to 18.7 percent, 1985 to 1993). By contrast, unemployment has fallen among those with primary education or less. This data is not disaggregated by gender (5).

Underemployment, defined as those in the working population who are working under 32 hours per week, was 20 percent for the population as a whole (1990-1), but 10 percent for men and 41 percent for women. The gender difference in underemployment is wider in absolute terms in rural areas (13 percent for men compared to 44 percent for women) than urban areas (9 percent for men compared to 35 percent for women) areas (6).

## 4. Feminization of Wage Employment in Morocco

Table 2  
**Wage earners as a percentage of total working  
 population by gender, 1986, 1993**

	1986	1993
Men	61.6	55.5
Women	55.3	59.5
Total	61.6	56.0

Source : Belghazi, 1995: 27.

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There has been a feminization of wage employment in urban Morocco over the period 1986-93 (see Table 3). While the proportion of wage earners in the overall urban labour force has decreased from 61.6 percent (1986) to 56 percent (1993) with the growth of the informal sector, of the total working female population, almost 60 percent were wage earners in 1993 (up from 55.3 percent) compared to 55 percent of men (down from 61.6 percent). The proportion of working women who are wage earners increased more rapidly than that of men, at 5.2 percent per year, compared to 4.2 percent per year, in the period 1986-93 (see table 3). In 1993, women formed 32 percent of urban wage earners, compared to 30 percent in 1986.

Table 3  
**Economically active population by professional category and gender, 1986-1993**

Professional category	Percentage of labour force (1993)		Annual average growth rate (1986-1993)	
	Men	Women	Men	Women
Unemployed, never worked	6.6	12.9	8.9	3.9
Self-employed	20.5	4.6	8.0	6.6
Employers	4.9	0.73	11.5	9.3
Wage earners	55.5	59.6	4.2	5.2
Partners or cooperative members	4.1	0.73	19.4	20.3
Workers at home	0.24	18.0	- 2.5	0.9
Home helps	4.6	2.1	11.6	6.6
Apprentices	3.3	1.2	8.8	- 6.6
Not declared	0.17	0.14	- 3.4	- 11.8
Total	99.911	100.00	6.3	4.1

Source: Statistical Directorate, cited in Belghazi, 1995: 28.

Women's share of formal employment grew in manufacturing as well as in service employment (e.g. public administration, teaching, health, banking and insurance). The proportion of working women employed in manufacturing increased from 21 percent to 37 percent in the period 1980-1993.

Women's employment has grown faster than overall employment in most manufacturing sectors except those, such as clothing, where women already formed a higher proportion of the labour force (76 percent in 1980). Women's employment rate even grew in sectors where the overall labour force participation rate was in decline, such as beverages and tobacco and basic metals. A positive relationship was found between the rate of increase in real wages and those sectors with relatively high rates of female employment, which, it is argued, gives evidence of the ongoing demand for female labour (7).

(7) An alternative

interpretation might be that, where the rate of female employment is already quite high, the male-female ratio in the labour force is shifting back again.

## 5. Wage Differences by Gender in the Urban Working Population

Although data directly comparing male and female wages were not available by manufacturing sector, comparison of crude data on average wages in enterprises with different levels of “female intensity” suggests that the higher the representation of women in the enterprise labour force, the lower the average wage (see table 4).

Table 4  
Average wage according to percent of women employed in enterprise, 1993

Percentage women employed	Average wage (dirham) (1993)
< 20 percent	25,600
20-25 %	25,139
25-45 %	26,662
45-64 %	21,716
> 64 %	17,437
Total	24,020

Source: Belghazi, 1995a: 9.

Further statistical analysis reveals a positive correlation between the level of exports in an enterprise and the number of women employed ; as well as a negative correlation between the number of women employed and average wages.

Looking at different manufacturing sectors, a pattern can be observed, that the higher the share of women’s employment in the sector, the lower the average wage tends to be (see table 5 below).

Table 5  
Sectoral breakdown of average wage, share of women’s employment and percentage of output exported

Sector	Average wage (1000 Dh)	Rate of Women’s Employment	Percentage of output exported
Food products	36.79	10.83	0.64
Other food industries	22.86	36.10	49.43
Textiles, knitted and crocheted goods	23.88	42.20	50.66
Clothing (not shoes)	19.23	77.88	90.14
Leather goods and shoes	23.75	30.87	53.06
Electrical and electronic equipment	51.00	41.06	38.43
Other manufacturing	37.25	33.63	24.76
Total	31.47	35.54	41.21

Source: Belghazi, 1995a: 11.



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Table 6 illustrates the distribution of male and female labour force by wage level. This shows that the female labour force is more concentrated among those earning 1500 Dh or less than is the male labour force (56 percent compared to 44 percent).

Table 6  
Male and female labour force by wage level

Wage level	% male labour force	% female labour force	Total labour force
< 1000 Dh	21.15	33.00	23.98
1000-1500	22.77	25.84	23.50
1500-2000	18.95	12.15	17.33
2000-3000	19.02	16.60	18.45
3000-4000	6.72	5.03	6.32
4000-5000	2.42	1.60	2.22
>5000	3.64	1.75	3.19
Not declared	5.34	4.03	5.03
Total	100.00	100.00	100.00

Further data disaggregates the male and female labour wage earners by sector (administration, state enterprises, private, informal – defined as enterprises with ten employees or less – and household) according to whether they earn more or less than the minimum wage (Salaire Minimum Interprofessionnel Garanti : SMIG). Overall, 54 percent of female wage earners earn less than the minimum wage while 39 percent of men do. Interestingly, however, a higher proportion of the female than the male labour force in the informal sector earns the SMIG or more, whilst in the private formal and public sectors the reverse is true.

While the above data gives indications of the pattern of wage differentials between women and men in the urban labour force, it does not in itself demonstrate that these differentials are statistically significant, or that they are due to discrimination per se. To establish this a more rigorous econometric analysis is needed.

## 6. Theoretical Explanations for Wage Discrimination by Gender

Neoclassical economic theory of wage formation states that wages are determined by marginal productivity, where labour markets are perfectly competitive markets and there is homogeneity and perfect substitutability of the labour force. However, observation reveals that, in actual labour markets, there are considerable and persistent wage differentials between social groups (men and women, but also e.g. ethnic, caste and race groups) which are not easily explained by orthodox theory (Birdsall and Sabot, 1991).

Attempts to explain labour market discrimination within the neoclassical framework have looked at both demand and supply side issues. Demand side explanations have focused on employer prejudice (e.g. Becker, 1957, cited in Birdsall and Sabot, 1991: 2) and statistical discrimination due to imperfect information (Phelps, 1972 cited in Birdsall and Sabot, 1991.).

In the former explanation, employers have a preference for hiring people from their own, or particular social groups, and thus are prepared to pay a premium on wages to hire workers from the preferred group. In the latter, a “transactions costs” approach is used to explain why women are paid less than men and/or discriminated against in recruitment. In this case, gender is seen as a supplier of information, where the time and money involved in assessing the capacities of employees is limited. Employers use gender as a screening device, on the basis that (observing existing gender divisions and educational level) women are deemed on average likely to be less productive than men. While the impact of this is discriminatory, since all women are assumed to have the characteristics of the average, presumed inferior, woman, it is held to be not intentional discrimination. Employers lack information about the actual productivity of individual workers and this information is too costly to acquire on a case by case basis. So, employment decisions are made on the basis of information or assumptions about the average characteristics of a particular social group. Ultimately, however, it is unclear whether there is a real difference between these two explanations ; assumptions about particular social groups may themselves be founded in prejudice.

Other approaches to explaining women’s lower wages rest on supply side issues, i.e. their weaker attachment to the labour force, due to childbearing and rearing responsibilities. This also ties in with institutional approaches to labour market analysis where technology is seen as key to the development of primary and secondary labour forces, and labour force segmentation. Since women are more weakly attached to the labour force, they tend to be confined to lower wage jobs in the secondary labour force. It also links in with Becker’s theory of household specialization and comparative advantage. Becker’s (1981, cited in Schultz, 1991: 16) approach suggests that women may choose to specialize in domestic work, rather than wage earning work, because they are more efficient in this sector, as a result of pre-existing gender divisions of labour. Furthermore, because women are less efficient in commercial activities (since they have not specialized in these or made human capital investments), they command lower wages in the labour market. This differs from previous theories in that it does attempt to explain women’s lower wages, not by intrinsic biological differences, but rather by a theory of gender division of labour according to comparative advantage. Nevertheless, it rests on the idea that women’s productivity is lower and that the market itself is non-discriminatory.

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Here, it is argued that a supply-based, behavioral model is not a wholly satisfactory explanation in the sense that women do not freely choose to underinvest in training. There is an interplay between supply and demand factors, whereby, for example, a woman with limited prospects (because of statistical discrimination) invests less in training and therefore loses comparative advantage.

Estimation of a production function for 1992-3 shows that the elasticity of value added in respect of the participation rate of female workers (permanent or temporary) is lower than that for male workers in both categories. This, it is hypothesized here, gives some evidence that, in line with neoclassical theory, the productivity of the female labour force is lower, in support of the neoclassical approach.

## 7. Analysis of wage discrimination in Morocco

### Methodology

Exploratory econometric analysis was undertaken to establish the relative contribution of supply and demand-related factors to women's lower wages in Morocco, using 1993 data from the national urban employment survey (ENPAU), which covers urban wage earners in both formal and informal sectors.

Following Arrow (1973) and Becker (1975), separate wage functions are estimated for men and women (in logarithmic form), where wages are regressed on vectors of quantitative and qualitative explanatory variables in each case. A further regression used as the dependent variable the difference between women's actual wages and the wages they would receive (hypothetically) if their characteristics had been utilized to the full, in the absence of gender discrimination, i.e. as if they were men. This is calculated by substituting the coefficients on the quantitative and qualitative vectors of variables from the male wage function, and the constant from the male wage function, into the equation estimating the female wage (8). The coefficients in the final equation show the relative weight of each personal or work related characteristic in determining the average wage differential (9).

### Results of analysis of wage functions and estimation of gender discrimination in wages

Table 7 gives the estimates of wage discrimination using three different methods. The first is simply a comparison of the absolute wage gap between men and women using ENPAU data. The second is the estimations based on log linear earnings functions ; and the third is the estimate based on the difference between observed female wages and the theoretical male reference wage.

The main implication from this table is that the observed level of discrimination from direct comparisons of male and female wage estimates is lower than the level of discrimination comparing actual female wages

(8) The model used for the analysis of wage determination and discrimination is as follows:

$$\ln S_f = a_1 \ln v_f + a_2 \text{ qf} + \text{kf} + u$$

$$\ln S_m = b_1 \ln v_m + b_2 \text{ qm} + \text{km} + u$$

$$\ln E_{sfm} = \ln S_f - \ln S_m = (a_1 - b_1) \ln V_f + (a_2 - b_2) \text{ qf} + (\text{kf} - \text{fm})$$

$$\text{with } \ln E_{sfm} = b_1 \ln v_f + b_2 \ln Q_f + \text{km} + u$$

In final form :

$$\ln E_{sfm} = C_1 \ln v_f + c_2 \text{ qf} + \text{ke} + u$$

Where :

Sf = women's wages

Sm = men's wages  
 Sfm = theoretical wages for women if there was equal treatment of both sexes  
 ES<sub>m</sub>f: ratio of men's and women's wages  
 v = a vector of quantitative variables, together with the indicator f for the female population and m for the male population ;  
 q = a vector of qualitative variables, together with m (male population) and f (female population) indicators ;  
 a1 and a2: vectors of coefficients of quantitative and qualitative variables respectively for the female population  
 b1 and b2: vectors of coefficients of quantitative and qualitative variables respectively for the male population  
 c1 and c2: estimated coefficients, corresponding to  $c1 = a1+b1$  ;  $c2 = a2 + b2$ .

(9) This "decomposition" methodology appears to follow that developed by Oaxaca (1973).

with a reference theoretical male wage, controlling for the impact of personal and workforce characteristics by gender. This relates to the observation earlier that the urban female labour force is generally more educated than its male counterpart ; so that observed wage differences understate the true extent of discrimination.

Table 7  
**Average differential between men's and women's wages, using different estimation methods**

Method	Estimate
<b>Absolute differential</b>	
Male wage in Dh	1 896
Female wage in Dh	1 496
Gross differential	- 21.12 %
<b>Estimated wages from log wage function</b>	
Male wage in Dh	1 519
Female wage in Dh	1 163
Gross differential	- 3.42 %
<b>Estimated differential with theoretical reference wage</b>	
	- 41.20 %

Sectoral analysis of wage discrimination (see table 8) shows that this is highly variable, with the highest levels occurring in domestic service, banking and insurance and "other" manufacturing industries (not textiles and clothing), while the lowest levels are recorded for collective services (education and health) and trade as well as textiles and garments manufacturing. Interestingly, the most female intensive sectors (textile and garments) appear to have relatively low levels of discrimination. However, this may be because wages are depressed in the sector overall and men in the sector are paid lower wages than they would be in other sectors. On the other hand, as seen above, there is a positive relationship between the rate of female employment in manufacturing sectors and real wages, which may indicate that employers are recognizing the importance of retaining skilled female workers (Joekes, 1995a).

Table 8  
**Wage discrimination by sector**

Sector of activity	Percentage discrimination
Administration	- 29.18
Agric., forestry and fisheries	- 37.08
Textiles, clothing, leather	- 21.06
Other manuf. industries	- 46.68
Trade	- 8.46
Hotels and catering	- 38.69
Banking and insurance	- 56.90
Domestic service	- 63.61
Collective services (education and health)	- 3.35
Total	- 41.20

## 8. Contribution of different factors in explaining wage levels (male and female) and differentials (10)

Three different approaches were used in estimating gender gaps or discrimination in wages. In the first linear multiple regression, a dummy variable for gender was used, which gave a value for the wage differential of 273.52 Dh. In other words, men were found to have an advantage of 11.47 percent over the average total wage, while women have a disadvantage of - 3.42 percent. This, it could be argued, shows the "pure" effect of gender separate from its interaction with various household and work related characteristics (see below) (11).

Linear earnings functions were also estimated for the male and female workforce, with a range of personal and workplace related characteristics (12). Using this procedure, the average wage for men and women was calculated as 1 525 and 1 162 Dh respectively, a difference of approximately 23 percent (see columns 2-4 in table 9).

The results from these estimations showed that, in order of importance, the factors determining wage levels for men and women are :

- the constant (possibly indicating a minimum necessary income or reservation wage – which is higher for men than women) ;
- location of enterprise (with a higher coefficient for men than women) ;
- type of establishment (a lower coefficient for men than women) ; and
- "household characteristics" (positive for men, negative for women).

While some variables contributed positively to both male and female wage levels, others had a negative impact. For the most part the direction of the effect was the same, except for household characteristics. Household headship and size of household had a negative impact on wages for women, but a positive impact for men, while the number of working members in the household had a positive impact for women but a negative one for men.

Other factors were age, length of the working week and location (effect stronger for women than men), and monthly wage contracts (ditto). The lack of a diploma depressed wages for both sexes, but more so for women than men. Type of establishment has a negligible effect on male wages, but a slightly positive effect on female wages, particularly in government administration and the private formal sector, possibly indicating the effect of better regulation in these sectors. Branch of activity had a negligible or very small, negative effect in most cases.

From the estimated earnings functions, the notion of the reference wage across the genders arises, which allows the identification of the wages that would be paid to a person of given characteristics according to the wages function of the other gender. In the case, an estimated was made of the wages a typical female worker would receive if her gender were to change for male (see column 5 in table 9).

(10) It should be noted that the analysis undertaken here is preliminary in nature and ideally would need further, more rigorous testing and development of the model. There is a lack of statistical data presented on which to judge the significance and validity of the regression results. The large number of variables used in the multiple regression suggests the likelihood of problems of multicollinearity, for example.

(11) For simplicity, the results for this regression are not presented in Table 10.

(12) There is a strong assumption here that particular endowments have the same productivity value, irrespective of the gender of worker who possesses them (Joeskes, 1995).

Table 10  
**Factors determining wage differentials  
 between men and women**

Population	Total	men	women	women
<b>Labour force extrapolated</b>	1 893 252	1 451 340	441 912	459 799
<b>Explained variable</b>	wages	wages	wages	wage gap*
– Average in Ln	7.2663	7.33	7.058	– 0.53
– Average in Dhiram or %	1 431	1 525	1 162	– 41.14 %
<b>Household characteristics</b>	0.92	1.15	– 0.96	19.71
<b>Professional qualifications</b>				
– Training	– 1.95	– 1.31	– 1.34	– 26.27
– Job experience	19.72	14.11	18.85	175.07
<b>Job framework</b>				
– Working hours/week	9.14	6.56	6.39	65.46
– Type of employment	1.55	0.92	1.85	– 493.08
– Contract	4.32	0.00	3.99	– 20.38
– Location	5.25	2.65	12.89	– 84.27
– Branch	– 0.82	– 0.56	– 0.57	– 103.69
<b>Constant in percent</b>	62.41	76.48	58.89	567.45
<b>Value of constant in Ln</b>	4.54	8.37	4.153	– 3.11

\* Gap between observed female wage and theoretical male reference wage.

Analysis of factors underlying the wage gap defined as representing discrimination (i.e. the difference between the actual female wage and the theoretical male reference wage), finds that some are positively associated with gender discrimination, while others are negatively associated with the wage gap.

The causes of gender discrimination in wages are in large part unexplained, as demonstrated by the fact that the constant term is the largest component of the wage difference. This residual represents the “starting level” of discrimination, i.e. what a new entrant with no qualifications would earn, by gender, and thus may indicate the gender discrimination based on wider social processes, or, possibly, actual or perceived differences in productivity between male and female workers.

Discriminatory processes linked to particular labour market variables were identified which explained the remainder of the difference between male and female wages. These do not relate specifically to the different sectoral and occupational distribution of men and women in the labour force (although this also leads to different earnings when averaged across the labour force), but to different rewards accruing to different personal (supply) and workforce (demand) characteristics.

The main explained factor contributing to lower wages for women is age at first job (here subsumed under job experience), i.e. the later a woman

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starts work, the more likely she is to earn less than a man starting work at the same age. This may act as a disincentive to women pursuing an education, especially since the positive impact of education on the earnings gap seems to be small (Joeques, 1996).

A further explanatory factor in the male-female wage gap relates to the length of the working week, i.e. the longer the working week, the higher the wage gap between men and women. The elasticity of male wages to hours in the working week is 50 percent higher than that for women.

Finally, headship of household and size of household also appear to contribute to the gender gap in wages, the effect of the latter being stronger than the former. Careful demographic analysis from a gender perspective may be needed to understand this. Women who are heads of household earn less than others with the same characteristics ; the reverse is true for men. In other words, women are paid less as heads of household, while men are paid a premium. An explanation offered here is that poverty of female headed households may act to lower their reservation wage, whilst it has the opposite effect on male wage demands. Similarly, large household may correlate with poverty, such that the push factor on women (as "additional workers") to enter the labour force is greater, whilst increase in the number of working members has the opposite effect.

Other factors which appear to mitigate the gender gap in earnings to varying degrees are monthly wage contracts (other types of wage contract also have a compensatory effect, though smaller), working in the textiles or collective services industries (see also table 8 above), employment in certain locations, age, and absence of qualifications (in other words, there is less discrimination where both men and women are uneducated workers).

## **9. Implications for policy and scope for further research**

Drawing on the theoretical literature summarized in sections 1 and 6, the paper argues that the low level of female wages in export manufacturing in Morocco acts a disincentive to productivity increases, in two ways. Firstly, employers, faced with the availability of relatively cheap, flexible female labour under highly competitive conditions, are disinclined to invest in fixed capital to increase productivity. Secondly, the low wages paid to women may be a cause, rather than a consequence, of relatively lower productivity among women workers, who perceive that they are discriminated against and thus lower their effort (see Bourquia, this volume).

In this sense, a link is hypothesized between gender discrimination in wages, low productivity and declining competitiveness. A strong policy implication is that long-term efficiency and competitiveness in export industries requires a change in strategy towards productivity-enhancing measures both in terms of technology and capital investment and in terms of workplace organization and labour practices. Increasing wages for women workers may stimulate increased productivity (from both workers and

employers) and so be consistent, rather than in conflict, with competitiveness in the sector. Indications that real wages in the export clothing/ textiles sectors are indeed rising may be evidence that employers are beginning to take these steps already (Joeques, 1995a).

Based on the existing research and the specific findings relating to wage discrimination, a series of policy measures are proposed. First, given the observed discrimination against female heads of household working in industry, it is proposed that some form of unemployment insurance protection should be provided for this group to limit their exploitation. Awareness raising and advocacy work, e.g. with trade unions, is also proposed, to strengthen the legitimacy of higher wage claims for women heads of households (Joeques, 1996).

Policies are also proposed to reduce the penalties on women who are late starters in manufacturing employment, e.g. by providing training for older women. More generally, a culture of training and valorization of female skills is required (Joeques, 1996).

The long working hours (for little extra reward) of many women workers suggests a need for some form of control or protective legislation to ensure that this is not the product of coercion and/or that damaging health consequences do not result.

More broadly, proposals are made for reform of the current, dualistic labour market structure which would promote profit and flexibility at the same time as employment stability and upward mobility for employees. The key areas for reform that are stressed are job flexibility and security ; training and flexibility, worker participation ; and improving productivity and participation of workers in the informal sector. It is argued that these measures would have spin-offs in terms of addressing gender inequality in labour markets.

The tentative nature of the findings from this research require further, more detailed study in order to fully evaluate appropriate policy options. Some additional work has been done under the UNRISD project which looks at discrimination within the export textiles sub-sector (Belghazi, 1996a (13) ; 1996b ; Bourquia, this volume). This work underlines the gender-segmented nature of the urban labour market. Certain features of textiles employment are identified which suggest it is less discriminatory than other sectors. For example, the starting wage does not differ by gender ; discriminatory features are expressed mainly through different treatment in employment (14).

This study also provides evidence on returns to experience and education at different levels of the female workforce. Returns to work experience are better in textiles than in other sectors and the sector does not penalize low education levels, although rewards to middle levels of education are poor. This implies that women from poor families face considerable difficulties in trying to improve their position in the labour market. This may threaten

(13) This study uses a different methodology to estimate wage discrimination, and arrives at a different estimate for the sector.

(14) For further discussion of qualitative issues around employment in the textiles and clothing sectors, see the chapter by Bourquia (this volume).



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the existing niche of relatively uneducated, low income women in the manufacturing labour force, when export textiles firms find it necessary to upgrade their production methods and organization in response to global competition.

Overall, this research raises a number of questions which could usefully be pursued. For example, do men in feminized industries fare badly compared to other sectors ? Do similar features apply to other feminized industries (as well as textiles) ? One hypothesis worth exploring is whether the competitive pressures of export textiles production mean that, while in other sectors, gender prejudices allow men to capture an economic "rent", in the more competitive textiles industry, the equivalence of male and female productivity is acknowledged (Joekes, 1996). Linked to the overall performance of the economy, it would also be worth exploring whether the high degree of segmentation in the urban labour market adds a further layer of static allocative inefficiency to that linked to wage discrimination *per se*.

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