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Wage discrimination by gender in Morocco's urban labour force: Evidence and implications for industrial and labour policy

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I. Background

1. 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 Joeques, 1993; Pearson, 1998). The secular rise in female labour force participation globally in recent decades (Joeques, 1987; United Nations, 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). Underpinning these debates is Sen's concept of "perceived contribution" as a factor in increasing women's bargaining power within the household (Sen, 1990). In this view, earned income through wage employment may contribute more to the women's status than less visible forms of economic activity.

2. 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 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, as well as between different groups of women. For example, studies cited in Ashenfelter and Oaxaca (1991:43-47) report earnings differentials from as low as 27 per cent (Brazil, formal sector) to as high as 85 per cent (Nicaragua, national). Hotchkiss and Moore (1996:671) find a gross earnings differential of around 20 per cent for Jamaica. Terrell (1992:393) reports female earnings as a percentage of male at between 47 per cent and 87 per cent, 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 per cent and over 100 per cent, depending on country, sector and education level, *inter alia*, with many estimates at over 60 per cent of the wage gap (Ashenfelter and Oaxaca, 1991:47; Psacharopolous and Tzannatos, 1992; Terrell, 1992). Aggregate gender discrimination may disguise

differences in impact between groups of women. For example, there is evidence, particularly from Asia, that married women suffer from discrimination to a far greater extent than single women. Similarly the extent of discrimination may vary with the education level or age of workers (World Bank, 1995; Psacharopolous and Tzannatos, 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. The rigid separation of supply side and demand side factors also leads to a failure to recognize their interplay.

One overall conclusion is that there is no universal explanation linking gender discrimination to economic development (Ahnsenfelder 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 in particular sectors may be a more important factor (Appleton et al, 1990; Hotchkiss and Moore, 1996). Given entry barriers in formal labour markets, the relatively high proportion of the labour force, and particularly women — who are disproportionately represented — in informal sector or self-employment in developing economies is a major factor determining differential earnings. This suggests that existing studies of gender discrimination in wages may understate the problem since they mainly rely on data gathered in the formal sector.

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 has been criticized for not taking into account changes in human capital differences (Joekes, 1995c).

The causes of wage discrimination are identified in some of these studies, which highlight monopsonistic and segmented labour markets and imperfect information as underlying factors. Discussion in the literature of the impacts of wage discrimination by gender

suggests that not only will it have negative consequences for individual women, but also that it will have long-term negative impacts on the economy as a whole:

[D]iscrimination 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)

3. Objectives and structure of the study

The current study builds on the existing literature, in attempting to link the issue of gender-based 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 textile export in the global economy. This is a challenge to the common view that wages are too high in Morocco to compete with new entrants such as China, India and Viet Nam.

To develop this argument, the chapter 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 designed to redress gender-based wage discrimination, thereby, it is argued, improving productivity, and, by extension, the competitiveness of Moroccan industry.

Section II provides the overall macroeconomic context for the study, covering the period 1980-93 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 VI) and then the methodology and results of the analysis of wage discrimination undertaken in Morocco are presented (section VII). These results are analyzed in some detail in section VIII, which identifies the factors explaining differences in wage levels by gender, as well as wage

differentials, in urban Morocco. Section IX draws together policy conclusions and suggests fruitful areas for further research.

II. Economic performance and policy in Morocco, 1980-93

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 per cent of GDP, falling to 5 per cent in 1988, and rising again to 10 per cent in 1994. While the devaluation of the dirham 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 per cent annually. Between 1988 and 1993, this fell to 2.07 per cent, while import growth rose from 1.72 per cent annually (1980-88) to 7.21 per cent (1988-93). 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 1982-93² 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 their respective 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, 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.

III. Overall employment profile and trends³

Over the past 10 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 grew by 0.8 per cent annually in rural areas and 3.8 per cent in urban areas, faster than population growth in both cases (at 0.4 per cent and 3.4 per cent respectively). This was 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 per cent per annum 1986-1993, compared to 3.05 per cent for women). In 1993, 22.1 per cent of the urban female population over 15 was recorded as working compared to 73.1 per cent of the urban male population over 15.⁴ 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 either stagnated (for men) or fell (for women) in the period 1986-93 (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 per centage of the working female population under 15 in urban areas (falling by nearly 9 per cent per year, 1986-93), 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.

Table 1: Urban economic activity and unemployment rates by gender, 1986 and 1993, and average growth rates 1986-93

	1986 (%)		1993 (%)		Average growth rate 1986-93 (%)	
	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	40.3	12.7	42.9	11.9	0.90	-0.98
Unemployment rate	13.9	20.4	14.2	21.7	0.31	0.89

Source: Belghazi, 1995b:34.

Trends in unemployment and underemployment⁵

Unemployment rates are higher overall (by 50 per cent — see Table 1) among women than men in Morocco. 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 per cent, 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.

Additional data on unemployment by educational level show rising unemployment among qualified wage earners, including those with middle level education (up from 21.3 per cent in 1985 to 24.6 per cent in 1993) and especially those with higher education (up from 8.3 per cent to 18.7 per cent, 1985 to 1993). By contrast, unemployment has fallen among those with primary education or less.⁶

Economically active women are underemployed to a far greater extent than men. Underemployment, defined as those in the working population who are working under 32 hours per week, was 20 per cent for the population as a whole (1990-91), but 10 per cent for men and 41 per cent for women. The gender difference in underemployment is wider in absolute terms in rural areas (13 per cent for men compared to 44 per cent for women) than urban areas (9 per cent for men compared to 35 per cent for women) (Belghazi, 1995b:35).⁷

IV. Feminization of wage employment in Morocco

There has been a shift in the profiles of economic activity by gender in terms of occupational status. The proportion of working women who are wage earners increased more rapidly than that of men, at 5.2 per cent per year, compared to 4.2 per cent per year, in the

Table 2: Economically active population by professional category and gender, 1986-93

Professional category	Percentage of labour force (1993)		Annual average growth rate (1986-93)	
	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	0.7	11.5	9.3
Wage earners	55.5	59.6	4.2	5.2
Partners or co-operative members	4.1	0.7	19.4	20.3
Workers at home	0.2	18.0	-2.5	0.9
Home helpers	4.6	2.1	11.6	6.6
Apprentices	3.3	1.2	8.8	-6.6
Not declared	0.2	0.1	-3.4	-11.8
Total	99.9	100.0	6.3	4.1

Source: Statistical Directorate, cited in Belghazi, 1995a:28; 1995b:36.

period 1986-93 (see Table 2). In 1993, women formed 32 per cent of urban wage earners, compared to 30 per cent in 1986.

While the proportion of wage earners in the overall urban labour force decreased from 61.6 per cent (1986) to 56 per cent (1993) with the growth of the informal sector, of the total working female population, almost 60 per cent were wage earners in 1993 (up from 55.3 per cent) compared to 55 per cent of men (down from 61.6 per cent) (see Table 3).

Table 3: 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, 1995a:27; 1995b:36.

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 per cent to 37 per cent in the period 1980-93.

Women's employment has grown faster than overall employment in most manufacturing sectors except those, such as clothing, where women already formed a very high proportion of the labour force (76 per cent 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.⁸

V. 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"

indicates 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 percentage of women employed in enterprise, 1993

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

Source: Adapted from Belghazi, 1995a:9; Belghazi 1995b:18.

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.⁹

Looking across different manufacturing sectors, a similar 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, female share of employment and percentage of output exported

Sector	Average wage (1000 Dh)	Female share of employment	Percentage of output exported
Food products	36.79	10.83	0.64
Other food industries	22.86	36.10	49.43
Textile, 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: Adapted from Belghazi, 1995a:11; 1995b:19.

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
1,000-1,500	22.77	25.84	23.50
1,500-2,000	18.95	12.15	17.33
2,000-3,000	19.02	16.60	18.45
3,000-4,000	6.72	5.03	6.32
4,000-5,000	2.42	1.60	2.22
>5,000	3.64	1.75	3.19
Not declared	5.34	4.03	5.03
Total	100.00	100.00	100.00

Source: Adapted from: Belghazi, 1995a:17; 1995b:25.

Table 6 illustrates the distribution of male and female labour forces by wage level. This shows that the female labour force is more concentrated among those earning Dh 1,500 or less than is the male labour force (56 per cent compared to 44 per cent).

Further data disaggregate the male and female labour wage earners by sector (administration, state enterprises, private, informal — defined as enterprises with 10 employees or less — and household) according to whether they earn more or less than the minimum wage (*Salaire Minimum Interprofessionnel Garanti*: SMIG). Overall, 54 per cent of female wage earners earn less than the minimum wage while 39 per cent of male wage earners do. Interestingly, however, a higher proportion of the female than the male labour force in the informal sector earns the SMIG or more, while in the private formal and public sectors the reverse is true.

While the above data give 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.

VI. 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, on average, deemed 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 approach (1981, cited in Schultz, 1991:16) 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.

Here, it is argued that a supply-based, behavioural 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 1992-93 shows that the elasticity of value added with respect to 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.

VII. Analysis of wage discrimination in Morocco

1. Methodology

Exploratory econometric analysis was undertaken to establish the relative contribution of supply and demand related factors to women's observed 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.¹⁰ The coefficients in the final equation show the relative weight of each personal or work-related characteristic in determining the average wage differential.¹¹

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

Method	Estimate
Absolute differential	
Male wage in Dh	1896
Female wage in Dh	1496
Gross differential	-21.12 %
Estimated wages from log wage function	
Male wage in Dh	1519
Female wage in Dh	1163
Gross differential	- 23.42 %
Estimated differential with theoretical reference wage	- 41.20 %

Source: Belghazi, 1995a:18; 1995b:26.

2. 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 estimation 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 with a reference theoretical male wage, controlling for the impact of personal and workforce characteristics by gender. This relates to the earlier observation 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.

Sectoral analysis of wage discrimination (see Table 8) shows that it is highly variable, with the highest levels of discrimination 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 textile and garment manufacturing. Interestingly, the most female intensive sectors (textile and garment) 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 the rate of increase in real wages, which may indicate that employers are recognizing the importance of retaining skilled female workers (Jokes, 1995a).

Table 8: Wage discrimination by sector

Sector of activity	Percentage discrimination
Administration	- 29.18
Agric., forestry and fisheries	-37.08
Textile, 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

Source: Adapted from Belghazi, 1995a:19; 1995b:27.

VII. Contribution of different factors in explaining wage levels (male and female) and differentials¹²

Three different approaches were used in estimating the overall level and determinants of the gender gap 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 Dh 273.52. In other words, men were found to have an advantage of 11.47 per cent over the average total wage, while women have a disadvantage of -3.42 per cent. This, it could be argued, shows the “pure” effect of gender separate from its interaction with various household and work related characteristics (see below).¹³

Linear earnings functions were also estimated for the male and female workforce, with a range of personal and workplace related characteristics.¹⁴ 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 per cent (see columns 3-4 in Table 9).

The results from these estimations show 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 had a negligible effect on male wages, but a slight 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 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 this case, an estimate was made of the wage a typical female worker would receive if her gender were to change to male (see column 5 in Table 9).

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.

Table 9: Factors determining wage differentials between men and women

Population	Total	Men	Women	Female to male
Labour force	1,893,252	1,451,340	4,41,912	459,799
Explained variable	wages	wages	wages	wage gap*
average in Ln	7.2663	7.33	7.058	-0.53
average in Dh or %	1,431	1,525	1,162	-41.14 %
Household characteristics	0.92	1.15	-0.96	19.71
Professional qualifications				
Training	-1.95	-1.31	-1.34	-26.27
Job experience	19.72	14.11	18.85	175.07
Job framework:				
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
Constant (%)	62.41	76.48	58.89	567.45
Value of constant in Ln	4.54	8.37	4.153	-3.11

* gap between observed female wage and theoretical male reference wage

Source: Belghazi, 1995a:20; 1995b:28.

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 disparate 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 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 (Joekes, 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 per cent 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, while it has the opposite effect on male wage demands. Similarly, large households may correlate with poverty, such that the push factor on women (as "additional workers") to enter the labour force is greater, while 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 textile or collective services industries (see also Table 9 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).

IX. Implications for policy and scope for further research

Following from the theoretical literature summarized in sections I and VI, the low level of female wages in export manufacturing in Morocco could be hypothesized to act as a disincentive to productivity

increases in two ways. First, employers, faced with the availability of relatively cheap, flexible female labour under highly competitive conditions, are disinclined to invest in 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 Bourqia, this volume).

Because of its policy implications, it is important to investigate the relationship between wage discrimination and productivity in manufacturing in more depth. Although the traditional perception is that low productivity leads to low wages for women in the manufacturing sector in developing countries, it could also be hypothesized that gender discrimination in wages actually results in low productivity and declining competitiveness. If the data support this hypothesis, 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/textile sectors are indeed rising may be evidence that employers are beginning to take these steps already (Joekes, 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 household (Joekes, 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 (Joekes, 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 textile export sub-sector (Belghazi, 1996a¹⁵; 1996b; Bourqia, this volume). This work underlines the gender-segmented nature of the urban labour market. Certain features of textile 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.¹⁶

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 textile 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 the existing niche of relatively uneducated, low-income women in the manufacturing labour force, when textile export 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 textile export production mean that, while in other sectors, gender prejudices allow men to capture an economic "rent", in the more competitive textile industry, the equivalence of male and female productivity is acknowledged (Joeques, 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*.

Endnotes

1. This chapter is based on a series of research papers prepared by Saâd Belghazi for the UNRISD programme on Technical Co-operation and Women's Lives (see references). Sally Baden has summarized, interpreted and contextualized Belghazi's empirical analysis and related hypotheses.
2. The deficit in the balance of payments current account fell from 12.9 per cent of GDP in 1982, to 2 per cent of GDP in 1993 (Belghazi, 1995:3).
3. Data used in this study originate from the national urban employment surveys (ENPAU), which cover both formal and informal sectors. The rural population is not covered.
4. 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).
5. 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.
6. These data are not disaggregated by gender. The data on unemployment and education levels show a decline in total unemployment rate from 19.9 per cent in 1985 to 15.9 per cent in 1993 (Belghazi, 1995b:35). This is inconsistent with reported data in Table 1 which suggest rising unemployment rates for both men and women over the 1986-93 period.
7. No trend data were available on underemployment by gender.
8. An alternative interpretation might be that, in sectors where the rate of female employment is already quite high, the increase in the average wage reflects a reverse shift in the male-female ratio in the sectoral labour force.
9. The correlation coefficient between number of women employed and average wage was -0.1090 compared to -0.0751 between level of exports and average wage.
10. The model used for the analysis of wage determination and discrimination is as follows:

$$\ln Sf = a1 * \ln vf + a2 * qf + kf + u$$

$$\ln Sm = b1 * \ln vm + b2 * qm + km + u$$

$$\ln Esfm = \ln Sf - \ln Sm = (a1-b1) * \ln Vf + (a2-b2) * qf + (kf-fm)$$

$$\text{with } \ln Sfm = b1 * \ln vf + b2 * \ln Qf + km + u$$

In final form:

$$\ln Esfm = C1 * \ln vf + c2 * qf + ke + u$$

Where:

Sf = women's wages

Sm = men's wages

Sfm = theoretical wages for women if there was equal treatment of both sexes

ESmf = 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 $c1 = a1 + b1$; $c2 = a2 + b2$.

11. This “decomposition” methodology appears to follow that developed by Oaxaca (1973).

12. 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 multi-collinearity, for example.

13. For simplicity, the results for this regression are not presented in Table 10.

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

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

16. For further discussion of qualitative issues around employment in the textile and clothing sectors, see the chapter by Bourqia (this volume).

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