

Women, Work and Wage Equity in Agricultural Labour in Saiss, Morocco

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Abstract

This paper documents wages and working conditions for landless female and male agricultural labourers in Morocco. We found that higher-paid equipment-intensive tasks were predominantly assigned to men whereas women often performed lower-paid, time-intensive tasks. Women were systematically paid less than men even when they performed the same tasks. Enforcing existing legislation in Morocco to ensure equal pay for women is an essential first step towards enabling women to benefit equitably with men from their agricultural labour contributions. A revalorisation of the importance of agriculture is also necessary so that agricultural labour is not perceived as an occupation of last resort.

Keywords

Women, work, wage equity, gender norms, agency, agriculture, Morocco, youth

Introduction

Since their labour is the most important asset the landless poor in general, and women in particular, have to offer, it is critical that due emphasis is given to improving wages and working conditions (Razavi 2009; Dey de Pryck and Termine 2014). This is especially important in the agricultural wage sector as women increasingly perform the majority of agricultural work in the Global South, including the Middle East and North Africa (MENA) region, but are almost always paid less than men, experience more precarious working conditions, and have limited bargaining power (Mills 2003; Razavi 2009; Abdelali-Martini 2011; Dey de Pryck and Termine 2014). The concept of decent work, which stipulates fair pay, equal opportunities and treatment, security, social protection, social dialogue, as well as rights at work, offers a valuable opportunity to improve the working conditions of wage workers (ILO 2008). Despite receiving the backing and support of the international community for over two decades, more recently in the Sustainable Development Goals of 2015, decent work remains unenforced in rural areas and its assessment is missing in the rural development literature (Barrientos, Dolan, and Tallontire 2003; Dey de Pryck and Termine 2014). Assessment of decent work for women is especially challenging in the agricultural wage sector because of the lack of sex-disaggregated data. Even when sex-disaggregated data is available, inadequate monitoring mechanisms make it difficult to detect specific problems faced by informal wage workers in the agricultural sector (Barrientos, Dolan, and Tallontire 2003; Deere 2005; Tallontire et al. 2005; Bain 2010; Dey de Pryck and Termine 2014). As such, there is a need for wage documentation as the existing evidence is largely qualitative in nature (Deere 2005; Maertens and Swinnen 2012).

Through primary research on wages and working conditions in Saiss, Morocco, this paper contributes to the literature on gendered inequity in wages and working conditions in the agricultural sector, the underlying causes, and coping mechanisms. We use decent work for rural women's empowerment as the theoretical framework for this research while also exploring the coping mechanisms of wage workers (Mills 2003; ILO 2008). Deficits in decent work differ with local conditions and as such it is important to contextually identify them in order to respond effectively (Dey de Pryck and Termine 2014). In particular, the research investigates and assesses how opportunities and constraints related to sociocultural norms, working conditions, and wages interact to shape the experiences of female and male agricultural labourers working under different terms and conditions (family-owned and commercial farms, rainfed and irrigated areas, areas that experience male outmigration and areas that receive in-migration, and various crop types) in the agricultural sector of Saiss, Morocco. We also examine the understudied topic of gender dimensions of coping strategies, which are crucial to consider given the lack of enforcement of wage regulations in rural areas.

We begin this paper with relevant literature on gender and agricultural work in the Global South. We then outline relevant contextual information about the specific areas in which our fieldwork

was conducted in three regions in Saiss, Morocco that differ in biophysical, economic, and gender norms dynamics. We present the methodology and findings from our empirical research on wages and working conditions through a quantitative survey and qualitative data collected from agricultural wage labourers as well as labour supervisors. We describe opportunities for work, remuneration, problems experienced by workers, solutions proposed by them, and their coping mechanisms. We conclude the paper with recommendations for achieving decent work for agricultural labourers.

Gender and agricultural wage work

Most of the related literature on gender and agricultural wage work focuses on Sub-Saharan Africa and Latin America (Deere 2005; Tallontire et al. 2005; Razavi 2009; Dey de Pryck and Termine 2014). While most of the literature focuses on the working conditions (e.g. pay, social security, safety, childcare services, unionisation), a few studies also focus on the social, economic and political empowerment dimensions for women involved in wage work (e.g. Friedemann-Sanchez 2006; Said-Allsopp and Tallontire 2014; Abdelali-Martini and Dey de Pryck 2015). Their main contribution has been to prove that although women wage workers tend to have increased economic independence and increased decision-making power in their households, this comes at the expense of experiencing gender-based subordination at work, which Schwendler (2012) calls ‘subalternising emancipation’. The gender wage gap, for example, ranges from 50% in Afghanistan, including for the same work, to no gender wage gap in the cut flower industry in Colombia (Friedemann-Sanchez 2006; Maletta 2008).

The literature systematically reveals that women perform lower paid and manual tasks that are seasonal while men perform more permanent, technologically-sophisticated, and higher paying jobs although these stereotypes tend to break in conditions when the supply of male work, for example due to migration, is limited (e.g. Deere 2005; Dey de Pryck and Termine 2014). Wages and working conditions are reported to vary depending on migration dynamics, type of crops, farm, and market (traditional vs. more cash-generating crops). Export-oriented crops and large farms tend to have lower gender wage gaps and less precarious working conditions (Barrientos, Dolan, and Tallontire 2003; Maertens and Swinnen 2012; Dey de Pryck and Termine 2014). However, most of this research is conducted in Latin America and Sub-Saharan Africa. We explore these variations in the context of rural Morocco. The majority of workers in the wage sector are also often reported to be women heads of households (Friedmann-Sanchez 2006; Dey de Pryck and Termine 2014). There is a lack of focus in the literature on the age of workers. This is also a distinct contribution of our work.

Sexual harassment and lack of unionisation were also systematically reported as specific problems for women in the wage sector due to their high presence in informal jobs (Maertens and Swinnen 2012; Dey de Pryck and Termine 2014). This is often attributed to their need for flexible work due

to their domestic work burden. However, Razavi (2009) points out that offering women flexible work hours, even when they do not express a need for them, often becomes a justification for paying lower wages.

In their review of rural labour markets, Dey de Pryck and Termine (2014) and Razavi (2009) identify gender gaps in wages, working conditions, and occupational segregation as key challenges to overcoming gender inequalities and achieving decent work in rural labour markets. While gendered social norms are difficult to address, much can be done to promote gender equity in employment through policies, legislation, and enforcement (Dey de Pryck and Termine 2014). The same authors, among others (Mills 2003), emphasise the importance of political will and resources in overcoming vested interests in the status quo, which provides a supply of cheap labour to employers.

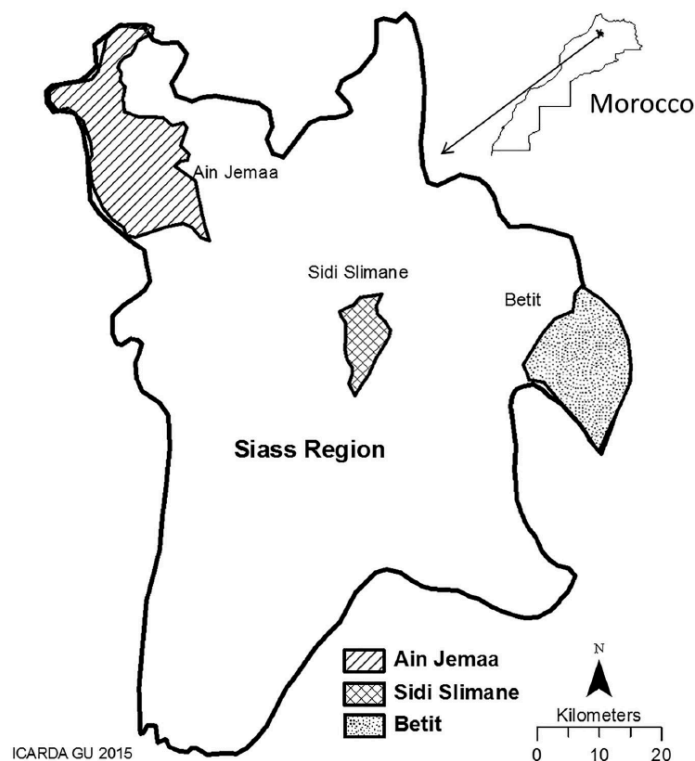
Agriculture in Morocco and the case study areas in Saiss

Agriculture plays an important role in the Moroccan economy. Wheat is the single most dominant crop in the country. A total of 3.2 million hectares is dedicated to growing it; seven million tons of wheat were produced in 2013 (Badraoui 2014). In areas where water availability is adequate year-round, onions, potatoes, and fruit are also grown. Fruits are an important export for the country. Processed fruit ranks fifth among the top ten export commodities by quantity in Morocco (FAO 2012). Employment in agriculture in Morocco has grown dramatically in the past 30 years and so has the contribution made to the sector by female agricultural labour. According to FAO (2011) Morocco witnessed a sharp increase in female employment in agriculture from 29% in 1980 to 38.9% in 1995 to 47.7% in 2010, while men's contribution to agriculture has decreased considerably from 66 to 55% between 1995 to 2011 (Abdelali-Martini 2011). Very similar trends of feminisation of agriculture - defined as women representing a majority share of agricultural labour, but typically at lower wages and more precarious working conditions than men - have also been reported in Algeria, Jordan, Syria, Libya, Palestine, and Egypt (ibid.). In Morocco, the dramatic growth in employment in agriculture may be attributable to the investments made by the Moroccan government in agriculture and food security through, for example, subsidies for irrigation, during this period. The privatisation of land in 2005 in the Saiss region may also have contributed to the rapid adoption of innovations (such as wells and drip irrigation) that led to increased cultivation of cash crops (Bossenbroek, van der Ploeg, and Zwarteveen 2015). Land privatisation, combined with the loss of common pasture land and drought in neighbouring areas, has fuelled landlessness and migration in some areas (the community of Ain Jemaa in our study is a good example), and created a surge in female and male agricultural labour in more productive agricultural areas (the communities of Betit and Sidi Slimane are good examples).

The three areas of the Saiss region in Morocco included in this study were Ain Jemaa, Betit, and Sidi Slimane. These areas differ in terms of natural resource endowments and labour markets. Ain

Jemaa is rain-fed, typically grows subsistence food crops such as wheat, chickpeas, fava beans, and olives. Most agricultural work is carried out by family labour. Demand for paid agricultural labour is relatively low, but often a little higher during planting, weeding, and harvesting seasons. The other two areas, namely, Betit and Sidi Slimane, have in recent years, owing to the Green Morocco Plan (GMP), received extensive irrigation infrastructure making more commercial cultivation feasible. The GMP offers grants to cultivators for drip irrigation and wells at highly subsidised rates (Al-Monitor 2014).

FIGURE 1 - CASE STUDY AREAS (AIN JEMAA, BETIT, AND SIDI SLIMANE)



Methodology

The empirical data for this study was collected through a household level survey administered to 415 labourers (187 women and 228 men, see Table 1) in Saiss, focus group discussions with wage workers, and interviews with wage workers and labour supervisors. The survey questions were designed to elicit information about types of agricultural tasks assigned to men and women and the underlying rationale; wage differences based on gender, age, and communities; problems faced by men and women in agricultural work; as well as their suggestions for solutions. In order to understand reasons for working in the wage sector, we asked survey respondents why and how they decided to work in agriculture.

TABLE 1—SEX AND AGE CHARACTERISTICS OF SURVEY RESPONDENTS

Sex			District			Total
Women	Age groups	Youth (below 24 years)	Ain Jemaa 0	Betit 10	Sidi Slimane 15	25
		24 and older	10	39	113	162
	Total		10	49	128	187
Men	Age groups	Youth (below 24)	3	12	23	38
		24 and older	16	83	91	190
	Total		19	95	114	228
	Age groups	Youth (below 24)	3	22	38	63
		24 and older	26	122	204	352
	Total		29	144	242	415

The qualitative interviews and focus groups were aimed at acquiring in-depth understanding of wages and working conditions in paid agricultural labour, underlying reasons, and gender norms which are often difficult to learn about in quantitative surveys (see Abdelali-Martini and Dey de Pryck 2015 for using similar approach). The survey data was complemented with a total of 36 semi-structured interviews with labourers (11 in Ain Jemaa, 13 in Betit, and 12 in Sidi Slimane), six gender-segregated focus groups (two in each of the three case study areas), as well as six interviews (two in each case study community) with labour supervisors who are themselves labourers but are also responsible for hiring and supervising other labourers. Qualitative data was analysed manually through theme identification and explanation building.

The survey data were analysed using both descriptive and inferential statistical tools. For inferential purposes, we estimated robust regression model described in detail in Verardi and Croux (2009) and compared means using analysis of variance (ANOVA) to examine whether there are significant differences (1) in average wage between gender groups, locations, and age groups and (2) in mean age of starting agricultural work between gender groups. We employed robust regression model (Verardi and Croux 2009) to see the cause and effect relationship between the average wage for agricultural labour and potential explanatory variables. We estimated women only, men only, and pooled (men and women data combined) models to consider patterns of the relationship between the average wage and the covariates. The covariates included aspects which we considered could have an impact on the wage, including gender, age, number of dependants, community, whether the respondent migrated seasonally to other areas looking for work, whether the respondent is a migrant, the level of education, whether the respondent also worked outside agriculture, and whether the respondent received agricultural training (see Table 2 for descriptive statistics of variables used in the regression).

TABLE 2— DESCRIPTIVE STATISTICS OF THE QUALITATIVE VARIABLES IN THE REGRESSION

	Community		
	Ain Jemaa	Betit	Sidi Slimane
Age			
Mean	41.379	36.606	38.459
St. Deviation	11.614	11.234	13.040
Number of dependants			
Mean	3.931	3.930	3.752
St. Deviation	1.944	2.109	2.054
Gender			
Men (%)	65.5	65.5	47.1
Women (%)	34.5	34.5	52.9
Total	100	100	100
Works in agriculture in other locations			
No (%)	86.2	56.3	75.2
Yes (%)	13.8	43.7	24.8
Total	100	100	100
Migration status			
Native (%)	89.7	75.4	38.4
Migrant (%)	10.3	24.6	61.6
Total	100	100	100
Level of education			
Illiterate (%)	75.9	54.9	70.7
Preschool (%)	3.4	0	2.1
Primary (%)	13.8	28.9	16.5
High school (%)	3.4	15.5	9.9
College (%)	3.4	0.7	0.8
Total	100	100	100
Paid work outside agriculture			
No (%)	62.1	84.5	90.5
Yes (%)	37.9	15.5	9.5
Total	100	100	100
Received agricultural training			
No (%)	100	96.5	97.9
Yes (%)	0	3.5	2.1
Total	100	100	100
Sample size	29	142	242

Wages and working conditions

We organised findings generated from the survey, focus groups, and interviews as follows: participation in wage work and task preferences, wages received by women and men, the respective tasks they are assigned, and the underlying gender norms and assumptions that influence those decisions. We also included data in this section about the seasonality of tasks, the different types of farms, group dynamics, problems faced at work, and solutions proposed by the labourers. The final section of findings examines how male and female wage labourers experience and cope with financial hardships. We shall indicate when we draw on findings from interviews and focus groups; otherwise, findings reported below pertain to the survey.

Participating in agricultural wage work

Some 81% of male respondents and 77% of female respondents explained that they independently made decisions about participating in the agricultural wage sector. Some 17% of male respondents explained that they had been forced to work in the agricultural wage sector by their fathers. By comparison, only 7% of female respondents explained that they were forced into the agricultural wage sector. Some 12% of male respondents and 7% of female respondents reported that they made the decision to work in agriculture willingly after discussions with their family members.

When asked about the reasons for participating in the agricultural wage sector, both male and female respondents most often cited family poverty and need for money. Young workers between the ages of 15 and 24 (16% of young women and 13% of young men) were more likely to mention a desire to leave school and gain independence as the reason for joining agricultural labour. Our findings resonate well with Bossenbroek, van der Ploeg, and Zwarteven (2015) who noted that although youth in Saiss were motivated by different material and ideological goals than their parents, they continued to be interested in agriculture as an occupation and considered “*modernity to be quite compatible with rurality*” (Bossenbroek, van der Ploeg, and Zwarteven 2015, 342). Some 21% of adult male respondents and 26% of young male respondents identified agriculture as the only occupation available to them and therefore as the main reason for working in the sector.

TABLE 3— DETERMINANTS OF AVERAGE AGRICULTURAL LABOR WAGE IN THE THREE COMMUNITIES

	(1) Women only	(2) Men only	(3) Pooled
Age in years	0.244 (0.217)	0.314 (0.321)	0.406* (0.190)
Age in years squared	-0.002 (0.003)	-0.003 (0.004)	-0.005* (0.002)
Gender (1 = Female)			-9.091*** (1.017)
Working in other areas (1 = Yes)	1.797 (1.312)	0.089 (1.544)	0.350 (1.011)
Migrant (1 = Yes)	0.089 (1.089)	-2.033 (1.651)	-0.975 (0.978)
Number of dependants	0.025 (0.276)	0.548 (0.363)	0.320 (0.227)
Betit	2.442* (1.121)	4.841*** (1.190)	4.698*** (0.794)
Sidi Slimane	2.851** (1.038)	4.232*** (1.253)	4.222*** (0.791)
Pre- & Primary school	1.098 (1.393)	-0.242 (1.058)	0.009 (0.784)
High school and college	-1.503 (1.919)	-0.144 (1.282)	-0.851 (0.960)
Engaged in paid work outside agriculture (1 = Yes)	-7.829** (2.392)	0.646 (1.812)	-0.961 (1.331)
Agricultural training (1=Trained)		3.715 (3.679)	2.201 (2.894)
Constant	53.930*** (4.015)	60.683*** (6.228)	59.572*** (3.712)
Observations	186	226	413

Note: Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Both women and men in all age groups mentioned wanting to help their families as a major reason for participating in the agricultural wage sector. This included helping parents and husbands in meeting household expenses. Similar findings are reported by Friedemann-Sanchez (2006) whereby women contribute to family income due to increased living expenses. Similar familial problems were identified by all groups of male and female workers: sick parents; parental death, particularly the death of sole-breadwinning fathers; and family disputes, which often led to moving out of natal homes. Some women mentioned migrating into the Betit and Sidi Slimane regions to work in the agricultural wage sector, sometimes without the knowledge of their husbands, because paid agricultural work was not socially acceptable for women in their home communities.

Labour opportunities and preferences

Labourers had access to diverse sources of information for finding work opportunities. Women mostly relied on neighbours, friends, *mawqif* (labour mart), and middle men to access job opportunities. Men were relatively less dependent on *mawqif* and middle men. Men typically had stronger relations with landowners, who are largely men, for finding work. This reflects local norms related to gender segregation that limits interactions between men and women. Thus, men had wider access to sources of information about work opportunities. Some respondents reported that local coffee shops, for example, provided many male labourers both with information about agricultural work as well as supplementary non-agricultural work. Many of the interviews with male labourers were indeed conducted in coffee shops.

When asked whether they had a favourite task, 38% of the women and 22% of the men respondents confirmed that they had no favourite tasks, and that their employment in the agricultural wage sector is simply an option of last resort. Both male and female respondents considered the work exhausting and unstable and the payments low.

Other labourers did express preferences. The three tasks most preferred by men were seeding, planting, and harvesting, all three also reported to be better paid. Harvesting was additionally deemed an easier task. Women's most preferred tasks were packing, harvesting, and preparing cuttings for grafting since they paid the most and were easier to complete. Weeding was identified as a preferred task by both men and women because it was available throughout the year. Women identified onion as the crop they liked best because they could complete work early and leave for home to attend to domestic chores. Onion planting and harvesting were preferred tasks because payment is contingent on completing the task at hand rather than committing to work for the entire day. The pressure women in general, and low-income women in particular, face juggling remunerative and reproductive responsibilities has, of course, been documented by researchers in many global settings. Women working in the agricultural sector in Saiss are clearly no exception.

These findings suggest that women participated in wage work not because of its flexible work hours but due to lack of other opportunities and the need to contribute to household income.

Wages and tasks

The average daily wages reported by men and women reveal that there is a gap of about 10 dirham (during time of fieldwork US\$1≈ 10 dirham) or 16% in favour of men. The analysis of variance (Table 4) shows that this difference is significant. The pooled robust regression model (Column 4 in Table 3) shows very similar results in that women receive on average 9.09 dirham less than male workers, *ceteris paribus* (Table 3).

TABLE 4— ANOVA RESULTS FOR WAGE MEAN AND STARTING AGE IN AGRICULTURAL WORK COMPARISONS

Independent Variables	Variables*	Dependent	Sum of Squares	df	Mean Square	F	Sig.
Wage * Com	Between Groups		4056.187	2	2028.094	9.470	.000
	Within Groups**		87805.981	410	214.161		
	Total		91862.168	412			
Wage* Youth	Between Groups		490.922	1	490.922	2.208	.138
	Within Groups		91371.246	411	222.314		
	Total		91862.168	412			
Wage* Gender	Between Groups		10079.084	1	10079.084	50.652	.000
	Within Groups		81783.084	411	198.986		
	Total		91862.168	412			
Age of starting work* Gender	Between Groups		6573.582	1	6573.582	98.351	.000
	Within Groups		27470.500	411	66.838		
	Total		34044.082	412			

Note: ** As expected, the mean wage in the irrigated areas (Betit and Sidi Slimane) is significantly different than the mean in the rainfed areas (Ain Jemaa). However, there is no significant difference between sites within irrigated areas of Betit and Sidi Slimane.

The tasks that generate the highest labour demand are harvesting, weeding, planting, and seeding (Table 5). Although both men and women perform these tasks, women tend to be preferred. When asked why women are preferentially hired for these activities, both male and female labourers responded that although these tasks required significant manual labour, they were easy to learn and not overly strenuous. They further emphasised that because these tasks were understood to be laborious but not require much physical strength, it was also possible to pay less to get them done.

This is congruent with findings from other parts of the world (e.g. Mills 2003).

TABLE 5— AGRICULTURAL ACTIVITIES BY GENDER

Activities	Women	Men	Total
Harvesting legumes & fruits	112	133	245
Weeding	126	70	196
Planting & seeding	71	124	195
Harvesting onions & potatoes	57	74	131
Packing	87	26	113
Thinning	71	38	109
Transplanting onions	51	45	96
Pruning	17	50	67
Irrigation	4	55	59
Pesticide application	9	25	34
Grafting	30	2	32
Sorting onions	10	3	13
Fertilizing	1	10	11
Supervising labourers	2	6	8

Almost twice as many women as men worked in weeding, thinning, packing, grafting, and sorting onions. These tasks require longer periods of time to complete and are perceived to require both patience and “nimble fingers” - gender essentialisms assumed to characterise women more often than men (see, for example, Mills 2003). A combination of these assumptions and women’s greater willingness (borne at least partially of a lack of options) to work for lower wages motivated employers to hire women more often for these tasks. While men were paid 70 dirham on average per day for packing and weeding across crops, women were paid 50-60 dirham. The most pronounced gender wage gap in harvesting (70 dirham for men versus 50 for women) was for olives. Interviews with labourers and labour supervisors in 2015 revealed that while men used sticks and machines to harvest olives, women collected olives from the ground.

When all agricultural tasks required to produce a single crop are considered, wheat had the largest crop-specific wage gap between men and women. Women were almost exclusively hired for sieving wheat while men were hired for a range of different activities. Women earned 20-25 dirham per bag for sieving wheat while men were paid between 70 and 200 dirham for tasks such as spraying, harvesting, and weeding. These findings for olives and wheat suggest that indeed export-oriented crops are both higher paying and have a smaller gender wage gap (Dey de Pryck and Termine 2014; Tallontire et al. 2005).

Although far more women are employed in packing of fruits and vegetables, individual interviews with employers revealed that for every 10 women packing onions, two to three men were hired to carry boxes. These male labourers both packed onions and carried the boxes to the trucks. Similarly, fruit harvesting requires that men are also hired to carry boxes. Men were paid more because they were also expected to carry boxes of fruits and vegetables to the trucks. Men were

paid 120 dirham per day for packing and carrying the boxes, while women were paid 80 dirham per day. Interviews with labourers and labour supervisors in 2015 revealed that it was unanimously assumed that women would be unable and/or unwilling to carry boxes.

Men were also paid more for planting and related activities. For example, for transplanting onions from the nursery, women or children were paid 50 dirham. Men, on the other hand, were paid 70 dirham for the same task.

There were striking differences in the three communities in the responses about the social acceptability of women's paid work in agriculture. Focus groups with both male and female respondents in Ain Jemaa identified permission from husbands, working in sex-segregated groups, and proximity to home as important criteria for socially-acceptable agricultural work for women. In Betit and Sidi Slimane, on the other hand, respondents in focus groups did not seem to have any issues with women working in groups that also included men, nor with having to work in farms that were not close to their homes. These responses seem to suggest that there are more labour opportunities for women in Betit and Sidi Slimane and more social control over women's labour in Ain Jemaa. It is difficult to state the latter convincingly, though, since the restrictions placed upon women's labour in Ain Jemaa may be more indicative of the lack of adequate agricultural work for men rather than social control based on cultural norms. The cultural norms themselves may have evolved as a function of scarcity in Ain Jemaa - to protect available work for men. Some poor women in Ain Jemaa did complain that only men get work in the area and women have very few opportunities for paid work close to their homes. Thus, some of these women, especially widowed, divorced, and deserted women, migrate to the neighbouring communities of Betit and Sidi Slimane, where agricultural work is both more acceptable and available for women. Nonetheless, we found that there was a degree of social control over women's participation in agricultural labour even in Sidi Slimane and Betit. Focus groups with women labourers in the latter areas revealed that their husbands forbade them from working on large farms because of potential contact with other men. They were often restricted to working on farms in which the husbands personally knew the owners.

Irrigation, fertilizer and pesticide application, and supervision of labour are predominantly performed by men and earn more by an average of 20 dirham than the tasks which predominantly involve women. Based on our interviews with labourers and employers, the gender wage gap between tasks dominated by women and tasks dominated by men is on average about 25 percent. More men than women participated in planting and seeding various crops. Planting, seeding, and fertilizing were considered laborious tasks that also require *tamara* or physical strength, and men were always selected to perform them. Some of the planting and seeding activities were mechanised and did not actually require any physical strength to perform but only men were deemed able to operate the seeders and tractors. Similarly, applying pesticides requires operating machinery in the form of spray backpacks or tank sprayers. Male labourers were paid between 100

and 200 dirham per day to perform planting, seeding, and spraying. In addition to operating machinery, spraying also required access to information about the appropriate doses of pesticide application. Since spraying was considered a male task, information about pesticide doses was also exclusively available to men. Irrigation and pruning are also largely dominated by men. Pruning is considered a skill-intensive task, which typically only men acquire while growing up on or around farms as identified during interviews with labourers. Irrigation activities are typically carried out at night and exclusively by men. Abdelali-Martini (2011) reports that women are similarly excluded from irrigation work in Iran both because it is classified as a nocturnal activity and because cultural norms prevent women from interacting with unrelated men.

Laborious and skilled tasks performed by women - such as thinning, which required the use of scissors, and *archage* (the bending of trees so that the sap can reach the fruits more efficiently) - were paid at least 20 dirham less than labour-intensive and skill-intensive tasks performed by men. Women are paid 80 dirham per day while men earn 100-120 dirham.

The highest wage recorded for women (240 dirham per day) was for sorting onions. Based on the appearance of the onions, sorters must make decisions about which bulbs are rotten and which ones are not and, therefore, have a longer shelf life. The comparably high pay for this task can probably be attributed to its urgency and time-sensitivity. We could find no other examples in the literature of an exclusively female task paying a higher wage than male tasks. Women also sort potatoes but are paid only 70 dirham per day for this task, presumably because potatoes in general tend to have a longer shelf life than onions.

Young labourers (those under the age of 24) comprise a significant portion (16%) of participants in this study. Since youth face significantly higher levels of unemployment and migrate from rural to urban areas more frequently than other age groups (Bossenbroek, van der Ploeg, and Zwarteveen 2015), we paid close attention to specific employment opportunities and constraints facing young agricultural workers in our study. We found the gender wage gap for young workers to be slightly more pronounced than for adult female and male workers. There is a gender wage gap of about 12 dirham on average for respondents below the age of 24, and a gender wage gap of about 10 dirham for respondents above 24. However, young men's wages were not found to be significantly different from adult mean wages (Table 4). The pooled regression analysis shows that the age of the respondent has a quadratic relationship with average wage for agricultural labour (Table 3). Age has a positive and strong relationship with wages but only until about 40 years. This suggests that there is greater need for social protection for older labourers.

It is important to understand the age distribution of the respondents as well as age-specific opportunities and constraints in more detail. There are more men than women in the agricultural labour force in the lower age groups. This seems to suggest that boys are much more likely to enter agricultural work at a younger age. Indeed, when the 415 respondents were asked at what age they started working in the agricultural wage sector, men reported a younger age of 16 years versus 24

years for women. These results are statistically significant (Table 4). Of the three research locations, men in Ain Jemaa reported the earliest age of entry for male workers at 15 years while women in Betit reported the earliest age of entry into agricultural labour (at 22 years) for female workers. Work opportunities in Betit are typically on local farms whereas in Sidi Slimane they are more often on larger commercial farms. Interviews with labourers and labour supervisors revealed that women are often discouraged from working on commercial farms because they are assumed to be more vulnerable to sexual harassment and exploitation in such environments. Women who work outside their home communities (through the *mawqif*) are more likely to work for farmers that they do not know and, according to interviews with labour supervisors and labourers, more likely to experience sexual harassment. Since most of work available for women in Betit is on local farms and since there is also higher social acceptance in that community for women's involvement in paid agricultural labour, women are more likely to enter agricultural work at an earlier age in Betit.

It was difficult to gauge why there were twice as many men as women in the 26-35 age. The most plausible, and most often repeated, explanation we were offered during focus groups and interviews is that women are reluctant to work in agricultural wage labour due to real or assumed fear of sexual harassment and consequent reputational damage. Thus, women worked in the agricultural sector as a last resort. Similar findings are reported by Dey de Pryck and Termine (2014) in rural India. Especially if they are young and attractive, interviews with labourers revealed that women workers are reported to be subjected to sexual harassment by labour lords and asked for sexual favours, especially on commercial farms. Interviews with labourers also revealed that many women are more likely to tolerate aspersions about their character as well as misbehavior from labour lords on big farms because work is more frequently available for them on such farms and the pay is better than on family-owned and small farms.

While young workers (below the age of 24) represented only 16% of the sample in our study, the 36-45 age group dominated the survey accounting for about 33% of total respondents. Although young workers are by no means marginal in agriculture, their share of the agricultural workforce is small compared to adult workers. It is possible that either young workers are not particularly attracted to agricultural labour (Bossenbroek, van der Ploeg, and Zwarteveen 2015 discusses young people's ambivalence towards agriculture in Saiss), or that more adult workers, especially women, take on agricultural work in larger numbers out of necessity.

Both the average pay and gender wage gap were the worst for workers in Ain Jemaa. At community level, the wage gap is 12.07, 11.09, and 9.9 dirham per day in Ain Jemaa, Betit, and Sidi Slimane, respectively (Table 4). This translates to 24%, 17%, and 15% higher wage for men in Ain Jemaa, Betit, and Sidi Slimane, respectively. The results of the pooled regression analysis show that location was also found to be a very important variable determining average wage for agricultural labour (Table 3). Compared to Ain Jemaa, workers in Betit and Sidi Slimane receive 4.7 and 4.2 dirham more when everything else is held constant. This clearly shows that location differences

are key factors in determining wage differentials both between and within sexes.

Both Sidi Slimane and Betit have lower levels of task assignment by gender, almost all (86%) of the tasks are performed by both men and women. Ain Jemaa has a higher level of gender-based segregation of agricultural work: about 64% of tasks were performed by both men and women while 36% were assigned exclusively to either men or women. Overall, women perform 33% of agricultural work in Ain Jemaa, much lower than the other two communities where women perform 37–58% of agricultural work.

Seasonality of work and working conditions

This section explores the seasonality of wage work, the bargaining power of men and women, labour group dynamics, sources of information about agricultural work opportunities, the most desirable types of work, and how farm type affects working conditions. The most commonly reported type of wage work is seasonal labour hired during the peak planting and harvesting season from August to November in Betit and Sidi Slimane. In Ain Jemaa the main agricultural tasks generating paid employment are the harvesting of olive trees during November and weeding in April and May. Labourers from Ain Jemaa will often travel to Betit and Sidi Slimane to take advantage of the peak labour period there.

There are three types of workers at Zneibar, which is one of the largest commercial farms producing wine in Morocco: the permanent formal worker, the permanent informal worker, and the seasonal worker. Focus groups and interviews with labourers reveal that an equal number of men and women are employed in the permanent formal category. Men work as guards and irrigators while women work in ‘*frigo*’ storing fruits in large refrigerators. Although, this constitutes a small portion of the total labour pool at Zneibar, this group gains access to benefits such as health care and pensions. Then there is the permanent but informal category. This group works on farms year-round but, according to interviews with labourers in 2014, is let go every six months for two weeks so that the employer can avoid hiring workers on a formal basis. The third and most common type of employment is seasonal. Labourers are hired on a 15-day basis. Even workers who hold formal and permanent jobs typically started out as seasonal labourers. As in many other agricultural settings in the Arab States (see, for example, Abdelali-Martini 2011; Abdelali-Martini and Dey de Pryck 2015) workers on Zneibar farms work in sex-segregated groups, as revealed by interviews with labourers and labour supervisors in 2015, ostensibly to protect women from harassment.

Women are more likely to be hired occasionally and informally. The tasks most commonly performed by women tend to be carried out during the peak season. During the low labour-demand season, from December to February, most of the jobs available involve ploughing, pruning, irrigating, and fertilizing the land, which, as mentioned earlier, are performed predominantly by

men. Therefore, women are more likely to experience a severe lean period in the winter. Harvesting olives is one of the few tasks available to women in the winter. However, the pay is 10-15 dirham lower than other harvesting tasks - due both to surplus labour availability and lower labour needs during this time.

Other large farms also employ permanent labourers to irrigate, guard the land and supervise seasonal labourers but employment tends to be informal. A 50-hectare farm, for example, requires six guards and two irrigators (one for daytime and another for the night time) but this type of work employs a small number of exclusively male workers. The monthly wage ranges between 1300 and 2100 dirham. Most seasonal non-urgent work is paid a daily wage. Planting and harvesting tasks on smallholder farms is done *attache* or per task. Our focus groups with labourers revealed that they often preferred this type of work as they were paid 150-200 dirham per day versus 60-100 dirham per day during the non-peak season and on large farms. Despite the lower pay, both male and female workers on large farms are hired for longer periods of time (two weeks at a time) because the areas being cultivated are larger. However, on bigger farms we found that women are often paid less than men (by 10 dirham on average) even for the same tasks. Both male and female labourers reported that employers always assume that men are more efficient and faster than women and therefore pay men more even for the same tasks. Such findings of a wage gap for the same task are rarely noted in the literature (see Maletta 2008 for an exception). Other labourers reported that women were more obedient and hardworking, whereas men took frequent smoke breaks and were more likely to protest for higher wages and better working conditions. This certainly resonates with several researchers' assertion (e.g. Mills 2003) that the commercialisation of agriculture in many parts of the Global South has been predicated not only on cheap but also docile female labour.

Bigger farms predominantly produce fruit and the pay is lower. Onions and potatoes, which are typically grown on smallholder farms, require a surge of time-sensitive labour and tend to pay more. Although the pay is higher on small farms, our qualitative findings reveal that the gender wage gap is also higher and reaches up to 20 dirham even for the same tasks. Often women are also not compensated adequately and recognised for the tasks that they end up performing. For example, many women interviewed explained that although men are paid about 20 dirham more for carrying boxes during harvesting season, women also carry boxes so that the task can be accomplished as quickly and efficiently as possible. Yet women are paid 20 dirham less since only men are assumed to be carrying the boxes. This finding emphasises the need for qualitative research to understand hidden tasks related to the gender wage gap.

During the time of the survey in 2014-2015, working hours for daily wage workers was from 8 am to 3 pm. Before 2011, working hours were from 8 am to 5 pm. Interviews with both labour supervisors and labourers in 2015 revealed that both male and female labourers in the *mawqif* protested the working hours in 2011 and succeeded in getting them reduced by two hours.

Labourers receive overtime pay for any work performed after three pm. Since the *mawqif* determines the working conditions and wages in the entire area, the new schedule applied to all of Saiss. Similarly, women who were employed in tobacco farming in Betit refused to accept the low pay offered to them and the employer was forced to offer a higher wage. The task performed most often by women in tobacco farming involves the drying of tobacco leaves.

The new wage benefitted women employed in tobacco farms all over Betit. Unlike other Arab States, Morocco did not have the mass uprising against authoritarian regimes and large-scale protests of the Arab Spring in 2011. Nonetheless, it is important to recognise smaller victories won - such as collective organizing by agricultural labourers for higher pay - in Morocco against the backdrop of the Arab Spring in neighbouring Arab States.

Some women avoid working through the *mawqif* and prefer working within their communities for farmers that they or their husbands know. Many interviewed respondents simultaneously concurred that the labourers at the *mawqif* are predominantly women. This could perhaps be attributed to how desperate some women are for work, especially since many of them (about 45%) were *de facto* or *de jure* heads of households. Interviews conducted in 2015 with labour supervisors and labourers revealed that women in the *mawqif* are hired in groups. For each group of women, two or three (usually male) labour supervisors are hired to ensure that the job is done. The *mawqif* operates in the labour-intensive areas of Betit and Sidi Slimane. In Ain Jemaa there is no *mawqif*. There are also no labour supervisors; both male and female labourers are hired locally. Employers interviewed in Ain Jemaa explained that women-only groups are preferred for harvesting legumes because they accept lower wages (by about 20 dirham per person) compared to mixed-gender groups. Thus, employers prefer to hire women-only groups for harvesting legumes, which has perhaps consequently become a largely female task. This suggests that contrary to other researchers' findings, e.g. Dey de Pryck and Termine (2014), sexual harassment occurs less frequently on family farms.

Problems faced at work and solutions proposed by workers

To further understand working conditions, the study tried to understand the problems faced by male and female labourers at work as well as solutions suggested by them. About 31% of women respondents mentioned that they faced no problem at work as opposed to only 12% of men. Of course, this could simply reflect a combination of women's lower entitlement to paid labour, limited choices, lack of awareness about their existing right for equal pay, and weaker bargaining power rather than an absence of problems.

The major problems identified by male labourers included low wages, lack of work, and poor working conditions, specifically lack of social protection and informality of work. Women also identified these as major problems. However, working under exhausting conditions (including working under the sun and starting work early in the morning), abusive supervisors (frequent

insults), and sexual harassment ranked highest among problems faced by women. Female agricultural workers repeatedly reported that supervisors overseeing the work were especially disrespectful to women.

Both men and women complained that agricultural work is unstable and unreliable as a mainstay of livelihood. Many female and male labourers in interviews emphasised they are at most able to work three days a week during the low demand season. Although low payments were reported more frequently as a problem by men, our interviews with employers revealed that women are more likely to experience late and reduced payments. Women are perceived to be secondary breadwinners (even when they are not) and have less bargaining power than men, and are therefore more likely to receive late and/or reduced pay.

As mentioned previously, women are frequently sexually harassed by labour supervisors or fellow male labourers. Both male employers and male labourers emphasised during interviews that women are typically blamed for being harassed and that the issue of sexual harassment is not gaining the attention it deserves. Women were expected to refuse men's sexual advances and accused of initiating them if they complained. Rarely were victims of sexual harassment sympathised with. Because women's access to work often depended on their tolerance of sexual harassment, they were rarely able to resist unwanted advances or to demand respect at work.

Like men, women frequently identified low wages as a problem. Tasks that are completed mostly by women are a double-edged sword. Women are hired more easily to complete them but only because they are more likely to accept lower wages. Women are also more likely to self-select to work in women-only groups, even while receiving lower wages, because they assume that they will be better protected from sexual harassment. At any given time, there are also more women labourers available for work than male labourers. This increased availability of women labourers might also bring down average wages for women. One farmer explained that out of 400 women in the *mawqif*, 100 women might not find work on a given day. This finding was confirmed by women labourers who mentioned going to the *mawqif* at the crack of dawn but being unable to find work.

Both men and women identified mechanisation of agricultural work as a problem because it replaced tasks that had previously been performed manually, particularly by men. In turn, this sometimes led to men taking over tasks that had previously been performed by women, such as harvesting and weeding. This problem was more pronounced in Ain Jemaa, which is still the least mechanised area of the three case study areas but is - perhaps consequently - experiencing mechanisation faster than Betit and Sidi Slimane. Interviews with labourers revealed that, for example, the tank sprayer is replacing backpack spraying and seeding and ploughing is becoming increasingly mechanised.

Solutions proposed by respondents for many of these problems included more job creation, expanded social protection from government, and formalisation of work. By formalisation, respondents meant access to a stable income as well as social benefits and medical insurance. Some of the solutions to sexual harassment proposed by respondents included gender-segregation at work and marriage of single women. Respondents in interviews explained that women who are married are less likely to experience harassment in the workplace. Although the same respondents emphasised that women should command respect at work regardless of their marital status, they remained unconvinced that this could realistically be accomplished for unattached women through, for example, more public education and awareness raising about women's rights and gender equality. The workers also reported having no formal and effective venue to voice their concerns. They proposed the creation of associations to lobby for better wages and working conditions.

Coping strategies

Respondents were asked whether they experienced financial problems at any time of the year. Only 13% of women and 10% of men responded that they do not experience financial hardships during any time of year. Most men and women explained that the winter months were the leanest because there was very limited work available. Some labourers reported that they have financial problems throughout the year due to low wages and late payment of wages. Others mentioned experiencing financial hardship during the month of Ramadan and Eid al-Adha due to increased expenditures. Both men and women identified reducing spending and taking loans as the strategies most commonly used to deal with financial hardships. Credit from local grocery stores enabled many labourers to purchase household goods during lean times. Men had a wider range of coping mechanisms, including selling livestock, asking for advances from employers, and migration.

Men also reported having better access to other non-agricultural work and more savings. Women reported activities such as selling snails and working as maids in middle-class homes as strategies for surviving lean periods. Findings from the women-only regression analysis (Column 2 of Table 3) reveal that women depended less on agricultural work when they were working in non-agricultural activities (such as carpet making, seamstress, and paid housework) as seen from the negative and significant relationship between engaging in non-agricultural labour and wage from agricultural activities (Table 3).

Men reported selling leftover crops from farms and working in construction to get through the lean season. Networks of family and friends were identified by both men and women as means to cope with financial hardships. Moving in with family and accessing loans and financial assistance from parents, brothers, and children were identified as coping mechanisms by male and female labourers.

Conclusion

This study reinforced some established findings about women and wage equity in agricultural work - that women are employed in lower paying and seasonal tasks, experience sexual harassment, and lack formal voice- while identifying other issues such as - being paid less for the same task, resorting to informal means for protesting and coping with work conditions, experiencing late and reduced payments - that are not as well documented in the literature on gender and agricultural labour. The study also sheds light on sexual harassment dynamics which are often underreported in the literature.

Our findings highlight the importance of focusing not just on creating more agricultural employment, through export- and commercial-led agricultural production, but also paying closer attention to issues of equity in wages and working conditions, which are stipulated in ILO's decent work guidelines to which Morocco is a signatory.

Strengthening social protection floors in rural areas where employment is precarious should also be a priority for Morocco. These considerations are especially important for women whose networks for both finding work and coping strategies during lean seasons are limited compared to men. Awareness building for employers along with enforcement of legislation that already exists in Morocco to ensure equal pay, zero tolerance for sexual harassment, and better working conditions for women is an essential first step towards gender equity.

In 2006, the Moroccan government adopted a national strategy on gender equity and equality aimed at integrating the principle of equality between men and women in development policies and programs. It is important to note that the strategy also stressed the need to combat sexist stereotypes and societal prejudice against women. In practice, these stereotypes are, as our findings from Saiss demonstrate, are pervasive and often the major causes of discrimination faced by women (as also reported, among others, by Dey de Pryck and Termine 2014). Training women for higher paying jobs (such as, pruning and pesticide application) is key to breaking these stereotypes. Public policy should also anticipate mechanisation displacing wage work and train those affected in other skills.

Findings from our research in Saiss revealed that young men were much more likely than young women to be coerced into agricultural work because of family poverty. Deeply entrenched gender ideologies in Morocco and elsewhere require men to provide for their families. Our findings highlight the importance of paying research and policy attention to issues of gendered vulnerability for both women and men. Taken together, our findings and those of others (see, for example, Baruah 2009) reflect the importance of probing issues of social and economic inequity not just for further validation of female disadvantage, convincing as the findings may sometimes be, but also for counterintuitive findings that shed light upon the complexity and dynamism of gender relations.

Finally, our findings suggest that a deeper structural revalorisation of the importance and necessity of the agricultural sector within Morocco, the Arab states, and the world at large, is also required so that agricultural labour is not perceived as an occupation of last resort. Taken together, such approaches have the potential to contribute significantly to the economic, social, and political empowerment of agricultural labourers in Morocco and elsewhere.

Like any other study, our research has limitations. The survey was conducted during the winter (in December) and we were unable to include temporary migrant labourers, who might have had different gendered needs and limitations. More research is needed to explore the health implications for workers of heavy chemical use in the agri-export industry (Bain 2010). The fact that labourers in Morocco tend not to receive any health insurance in this sector makes this an especially urgent issue.

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