

EXPLORING DETERMINANTS OF FEMALE INFORMAL EMPLOYMENT: A STUDY IN GRAND CASABLANCA, MOROCCO

Dr. Abdelaziz Khalfaoui

National School of Business and Management, University of Hassan the First, Settat, Morocco

Abstract: Morocco, like many developing countries, grapples with a dual economic structure, characterized by a coexistence of formal and informal economic activities, with the latter being predominant. The Informal Production Units (IPUs) in Morocco, estimated at approximately 1.68 million units, play a significant role in the economy, contributing around 12.3% to the country's GDP and generating nearly 37% of nonagricultural jobs, totaling approximately two and a half million jobs. This prevalence of informal activities is a consequence of long-standing structural issues in the Moroccan economy, including low economic growth rates, inadequate job creation, and a persistent rural-to-urban migration trend.

In this context, the private sector, encompassing the informal sector, emerges as the primary source of employment, accounting for 91.3% of employment in 2014, excluding the agricultural sector. However, the participation of Moroccan women in the labor market remains notably limited, with an activity rate of 25.3% in 2014, compared to 72.4% for men. This gender disparity is influenced by social institutions and socio-cultural norms that often discourage women from active employment, favoring traditional domestic roles.

This study delves into the intricate dynamics of Morocco's informal sector, its impact on the economy, and the challenges faced, particularly in the context of gender disparities in labor force participation.

Keywords: Morocco, informal sector, economic duality, gender disparities, labor market participation. The Determinant Factors of Informal Female Employment: Analyzing the Professional Choices of Women in Grand Casablanca, Morocco

Introduction

Like developing countries, Morocco is characterized by economic duality; alongside formal "official" economic activities coexist informal activities, which are also predominant. Indeed, the Informal Production Units (IPU) are estimated at around 1.68 million units, contributing roughly to 12.3% of Moroccan GDP according to the national survey on the informal sector of 2013 and generating almost two and a half million jobs (37% of nonagricultural jobs). The persistence of informal activities and the proliferation of informal jobs are the consequence of structural dysfunctions from which the Moroccan economy has suffered for a long time. Examples of issues are the low economic growth rate (average growth rate below 4% over the period 1960-2015) and consequently, the weak capacity of the economy to create the sufficient number of jobs (for example, only 21,000 jobs, resulting from the creation of 27,000 jobs in urban areas and a loss of 6,000 in rural areas, in 2014) to employ

a young population with a strong demographic growth rate (average rate of 2.2% over the period 1960-2000), coupled with an uninterrupted rural exodus (the urban population increased from 35.2% in 1971 to 60% in 2014). In addition, the Moroccan institutional environment was, until a few years ago, very unfavorable for business creation, due, among other reasons, to exorbitant taxation and cumbersome administrative procedures relating to declarations of the creation of activity and its cancellation.

In Morocco, the private sector (including the informal sector) is by far the main provider of employment (excluding the agricultural sector), at a rate of 91.3% in 2014.

As for the participation of Moroccan women in the labor market, it remains very shy, compared with that of their neighbors in the Middle East and North Africa (MENA) zone. The female activity rate in Morocco is estimated at 25.3% (for a population of three million) in 2014 (against 72.4% for men), with a downward trend since 2000. Moreover, the rate of feminization of employment is only 26.1% according to the National Survey for Employment (ENE). The weak role of Moroccan women in the labor market is due to the influence of social institutions (family, marriage) and socio-cultural standards which remain hostile to the work of women and who consider that being at home brings about more satisfaction than an active woman in the perception of the majority of Moroccans. Apart from agricultural activities for rural women, employed women are divided between the formal and informal sectors.

The choice of the Grand Casablanca region (a region made up of two prefectures and two provinces: Casablanca Prefecture, Mohammedia Prefecture, Nouaceur Province, Mediouna Province) as a study framework seems to us to be judicious for it is twice useful. First, it is a region home to the city of Casablanca, the economic capital of Morocco which brings together a considerable pool of economic activity (it captured 21.3% of Moroccan GDP in 2015) and jobs (it is the first pool of formal and informal employment in Morocco). In addition, it is a highly urbanized region where agricultural jobs are a minority. In this article, we will try to highlight the determinants of informal female employment (non-agricultural) in the Grand-Casablanca region. We will in particular seek to measure the impact of the idiosyncratic determinants of access to the job market. In other words, we will try to assess the chances of a Casablanco woman to be employed in the informal or formal labor market, given her intrinsic (personal) characteristics. From the results of a survey, we conducted on this subject, we will use a multinomial logistical analysis to answer these questions, since we have defined several female employment statuses: formal employee, informal employee and informal self-employed. Knowing that:

- An informal self-employed person is a self-employed entrepreneur who does not have compatibility in accordance with the legislation in force;
- A formal employee is an employee with an employment contract; - An informal employee is employed without an employment contract.

Literature review

By virtue of the neoclassical analysis based on the rationality of economic agents, among several employment statuses, the occupational choice of an individual results from an arbitration of the utilities provided by each of these employment statuses (Johansson, 2000). A utility measured, in principle, by the gain in income provided by an employment status compared to other statuses. Starting from this analysis, the choice of an informal job

(self-employed or salaried) results from a cost/benefit calculation (Andrews et al, 2011), individuals who opt for the informal sector do so by calculation. They expect that this choice will give them more advantages (in this case, absence of taxes and social charges, absence of administrative registration costs, etc.), while the drawbacks which result from it (non- access to bank loan, ineligibility for public contracts and public subsidies, etc.) are external factors whose costs are lower compared to their advantages. The comparison of this theory with Moroccan reality, in the light of the results of the three surveys conducted on the informal sector in Morocco in 1999, 2006 and 2013, shows:

□ If we are interested in the status of the informal self-employed, two-thirds of cases of self-employment in this sector are attributable to the taste for self-employment (22.9%), in search of a better income (20.8%) and the family tradition (14.2%) and only 34.3% mentioned the lack of salaried jobs in the formal sector (in 2006). This trend is much the same in the other two surveys.

□ If we focus on the status of informal employees, the response of those concerned is almost the same: "informal employment is the only proposal available at the moment". If we look closely at the informal sector in Morocco, we see that it is characterized by:

□ Low productivity (one hour of work done in the informal sector generates almost 19 DH of added value, or almost half of the productivity generated by one hour of work in the formal sector, according to a survey on the informal sector in 2013);

□ Significant social fragility (low remuneration, lack of social protection);

□ A higher average working time, 56 hours per week (while the legal weekly working time is only 44 hours);

□ Unhealthy work sites (absence of drinking water 71.2%, absence of electricity 32.2%, absence of connection to the sewerage network 74.2%, etc.). These statistics showcase the precariousness of informal jobs compared to formal ones and do not suggest that people employed in the informal sector have voluntarily chosen to work in this sector of activity.

All in all, the occupational choice model does not fully match the reality of labor market in developing countries, as we have seen in the example of informal wages in Morocco. Hence, the emergence of a new theory which conceives informal jobs, not as a choice but as a consequence suffered by a section of the population excluded from formal activity due to failure of the public authorities (Perry and al, 2007). This theory puts the accent on the precarious social condition (poverty, low qualification, illiteracy, etc.) which condemns a significant part of the population to be directed towards the informal activities since it did not have its place on the formal market. Moreover, another study conducted on Morocco (El Aynaoui, 1997) showed that the occupational status of Moroccans is determined mainly by intrinsic characteristics of the individual (level of education, gender, marital status, etc.) and other parameters related to their family environment (socio-professional category of parents). Other studies carried out on developing countries support the same results; among others, (Bertrand, 2005) on young people in Cameroon, (Bellache et al, 2014) and (Hammouda and Lassassi, 2009) on Algeria (Gherbi, 2014) for the Wilaya of Bejaia in Algeria. All of these studies agree that access to the informal segment of the labor market is highly dependent on the intrinsic characteristics of job applicants. Other authors (Sbouï, 2006) propose going beyond the dualism of the labor market based on a cleavage between formal and informal and propose a

stratification determined by the characteristics of the jobs between “protective” and “non-protective” ones, reserved according to employee characteristics.

In addition, other authors such as (Thai, M.T.T. and Turkina, E, 2014) highlight the influence of the macroeconomic environment (strong economic growth, quality of institutions, good governance, diffusion of innovation, preponderance of the service sector in the economy, quality of human capital, etc.) on the encouragement of formal entrepreneurship (formal employment) and the discouragement of informal entrepreneurship (informal employment). The large share of informal entrepreneurship in Morocco is therefore due to a delay in economic development and to a population that is mainly ill-educated, with a low income level. Another more positive perception of informal entrepreneurship and informal jobs considers that in developing economies, these activities constitute a springboard to formality. Public authorities soften the administrative procedures relating to registration and support informal enterprises in their transition to the formal sector (Williams and Round, 2007).

For the year 2013, reading the profiles of active workers in the Moroccan informal sector, for both statuses, reveals that more than 45% of them have no education, 30.4% have a primary level and only 3% have a higher level. Even if it improved significantly compared to 2006 and 1999, the level of education of informal workers remains poor. They are also relatively young: 42.3% are under 34 and 67.8% are under 44. As for gender, access to informal employment is much lower among Moroccan women than among men, not because they are more likely to access formal employment than men, but simply because they have a much lower activity rate than that of men. What about women in Casablanca and their chances of entering the informal segment of the labor market? We will try to provide some answers to this question through an empirical study.

Box 1

We are going to try, in our study, to confront the theory according to which the choice of an occupational status depends on a rational calculation carried out by the economic agents confronted with several choices evoked by certain authors like Johansson, inspired by the neoclassical theory, the choice of a status is ultimately only an individual behavior based on optimization calculation. Thus, a busy worker makes the best use of the resources at his disposal to achieve his objectives, taking into account the constraints he encounters and the environment in which he operates. Through the results of our study, we will verify to what extent the women of Casablanca have chosen, by pure calculation, their occupational status.

Methodology

Before setting out the methodology adopted, we think it is wise to start by defining the key concepts of our study; namely, occupational status in Morocco. We define informal self-employed, formal employee and informal employee.

Definitions of concepts

The International Labor Organization (ILO) (notably the Fifteenth International Conference of Labor Statisticians (ICLS) and the literature have proposed several criteria for distinguishing between formal and informal enterprises (Charmes, 2002), (Roubaud, 2009) and (Alami Mejjati, 2006); namely the size of the company, the status of the workforce, bookkeeping, the completion of administrative records, as follows:

□ The size of the company: a threshold of 10 employees has been set. So, all companies employing less than 10 employees are deemed informal. However, the threshold of 10 employees is arbitrary and does not reflect the reality on the ground.

□ Indeed, the size of an enterprise depends, first of all, on the nature of its activity (for example, apart from the formality or informality of the activity, industrial enterprises generally employ more employees than enterprises of services). On the other hand, almost all formal Moroccan companies are VSEs and SMEs that employ less than 10 employees.

□ The status of the workforce: according to this criterion, companies employing only unpaid family workers or only casual workers are considered informal. If we adopt this criterion to distinguish the two components, we cannot, for example, classify companies that employ permanent employees and that regularly use casual employees.

□ The keeping of accounts: any company which keeps accounts of its activity in accordance with the accounting law in force is considered formal.

□ Administrative registrations: in order to regulate the exercise of economic activities, public authorities impose on businesses a whole series of administrative registrations. These include registration in the enterprise register, registration with the tax system, social security affiliation, and so on.

In our case, we will retain the third criterion, namely the keeping of accounts as a criterion for distinguishing between formal businesses and informal self-employed. It is an objective criterion and simple to verify. Moreover, it is the criterion used by all the surveys carried out on the informal sector in Morocco and recommended by the International Labor Office (ILO).

With regard to the distinction between the status of formal employee and informal status, one can either:

□ Refer to the existence of an employment contract to qualify the employee as formal (outside the agricultural sector) and informal in the absence of a contract;

□ Consider, apart from the employment contract, the statute of the company to which the employee in question is attached. Thus, the employee is formal when he belongs to a formal company and, on the contrary, he is considered as informal employee when he is employed by an informal enterprise (Charmes, 1994).

We will opt for the first criterion. So, formal employees have an employment contract (whatever the duration and form), while when the employment contract is absent the employee is considered informal.

Presentation of the empirical study

According to the results of the National Employment Survey of 2012, the total number of employed women, (outside the agricultural sector and not counting unpaid activities), aged 18 and over is estimated at 23,540 women. We drew 220 busy women from the list of 23,540 women using the simple random sample method (women had the same probability of being in our sample, and they were randomly selected using the random number table generated by Excel software). We surveyed these women during 2015. The response rate is quite satisfactory (184 questionnaires are fully usable).

Our sampling rate (n / N) is certainly below the threshold of 0.1: ($220/23540 = 0.0093$), but that does not mean that our sample is not representative (Ghewy, 2010). Indeed, to ensure the relevance of the results of our survey, we will calculate the precision term. For this, we take:

□ A risk of acceptance (α) of the sampling results equal to 5% (the risk accepted in the social sciences); □ A sample (n) of size 220;

□ A proportion (p) observed in the sample compared to the total population (unknown in our case), but which can be estimated at 0.5.

We can calculate the degree of precision (e) of our sample according to the following formula:

So, $e = Z \alpha / 2 \sqrt{p * (1-p) / n}$.

With $Z \alpha / 2 = 1.96$ (from the table of the normal distribution); $p = 0.5$; $1-p = 0.5$; and $n = 220$.

So, $e = 1.96 \sqrt{(0.5 * 0.5) / 220} = 6.60\%$.

The precision of our study is therefore quite satisfactory.

Definitions of target variables

□ We collected responses on the following aspects among the women interviewed:

□ Status of the activity: this is a variable which can take one of the following forms: an informal selfemployed, a formal employee or an informal employee;

□ Age: which we have grouped subsequently into five intervals, namely under 31 years (coded 1), between 31 and 40 years (coded 2), between 41 and 50 years (coded 3), between 51 and 60 years (coded 4) and 61 and over (coded 5);

□ Marital status: single, married, divorced or widowed. This variable will be coded as follows (1 for single, 2 for married, 3 for divorced, and 4 for widowed);

□ Level of education: four scales were adopted; namely, without any level (coded 1), primary level (coded 2), secondary level (coded 3) and higher level (bac and more, coded 4);

□ Size of household: corresponding to the number of people living with the woman questioned, this is a discrete quantitative variable;

□ Father's occupational status compared to the informal sector: this variable will take the value 1 when the father's job is located in the informal sector and the value 0 otherwise;

□ Satisfaction with the current professional situation: only two answers are proposed: yes (value 1) or no (value 0);

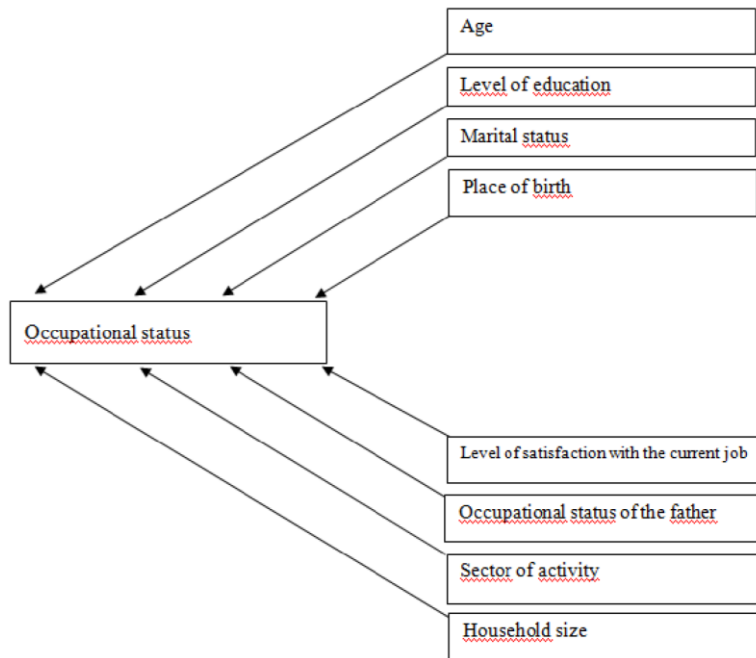
□ Place of birth: the reference is the region of Grand-Casablanca. This variable takes the value 1 when the woman questioned is native to the region. It takes the value 0 if she was born elsewhere;

□ Sector of activity: we have used the traditional nomenclature: namely industry (coded 1), commerce (coded 2) and services (coded 3).

Presentation of the statistical model

The multinomial logistic regression analysis of the occupational status of women in Casablanca should provide us with a prediction of this variable (dependent variable with three modalities: informal independent, formal employee and informal employee) from a series of qualitative explanatory variables (marital status, level of

education, sector of activity, place of birth, level of satisfaction, occupational status of the father) and a quantitative variable divided into five groups (age). We can schematize the model as follows:



Model hypotheses:

- First hypothesis: the age of the woman influences her occupational status.
- H1-0: absence of cause and effect between the woman's age and her occupational status.
- H1-1: existence of a cause and effect link between the woman's age and her occupational status.
- Second hypothesis: the level of education of the woman influences her occupational status.
- H2-0: absence of cause and effect between the level of education of the woman and her occupational status.
- H2-1: existence of a cause and effect link between a woman's level of education and her occupational status.
- Third hypothesis: the marital status of women influences their occupational status.
- H3-0: absence of cause and effect between the marital status of women and their occupational status.
- H3-1: existence of a cause and effect link between a woman's marital status and her occupational status.
- Fourth hypothesis: the place of birth of a woman influences her occupational status.
- H4-0: absence of cause and effect between the woman's place of birth and her occupational status.
- H4-1: existence of a cause and effect link between the woman's place of birth and her occupational status.
- Fifth hypothesis: the degree of satisfaction with the current status of women influences their occupational status.
- H5-0: absence of cause and effect between the degree of satisfaction of the woman with her current status and her occupational status.

- H5-1: existence of a cause and effect link between the degree of satisfaction with the woman's current status and her occupational status.
- Sixth hypothesis: the existence of a link between the occupational status of the father and that of the woman.
- H6-0: absence of a cause and effect link between the occupational status of the father and that of the woman.
- H6-1: existence of a cause and effect link between the occupational status of the father and that of the woman.
- Seventh hypothesis: the sector of activity influences the occupational status of women.
- H7-0: absence of cause and effect between the sector of activity and the occupational status of women.
- H7-1: existence of a cause and effect link between the sector of activity and the occupational status of women.
- Eighth hypothesis: the size of the woman's household influences her occupational status.
- H8-0: absence of cause and effect between the size of the woman's household and her occupational status
- H8-1: existence of a cause and effect link between the woman's household size and her occupational status.
- We have chosen the “informal employee” modality as reference modality.

Box 2.

Multinomial logistic regression is a model which makes it possible to model a qualitative variable which can take more than two modalities. In our case, the occupational status of a Casablanco woman can take three forms: "formal employee", "informal employee" and "informal independent". A reference modality must be selected (for example, we fixed the “informal employee” modality as reference modality for the comparator respectively with the “formal employee” modality and the “informal independent” modality. The estimated coefficients will be interpreted according to this reference modality. The answer to choose the modality "j" considering that the reference modality is modality 1 is therefore: $p(y = j | x_i) = \exp(\alpha_j + \beta_j x_i) / [1 + \sum_{k=2}^J \exp(\alpha_k + \beta_k x_i)]$. For modality 1, on a: $p(y = 1 | x_i) = 1 / [1 + \sum_{k=2}^J \exp(\alpha_k + \beta_k x_i)]$. , we can identify the variables that are statistically significant in the explanation of the dependent variable and measure the influence and the meaning of this influence through the coefficient associated with each explanatory variable.

Results

Relevance of the model used

The validity of the multinomial logistic regression analysis (Rakotomalala, 2011) depends on the verification of the underlying conditions. Moreover, the most important value is that corresponding to the Chisquare test associated with the Log ratio (LR). It makes it possible to assess whether the variables provide a significant amount of information to explain the target (dependent) variable or not. In our case, since the probability is less than 0.05 (it is equal to 0), we can conclude that the variables provide a significant amount of information (see Table 1). In other words, the independent variables influence the occupational status of women in Casablanca. Then, it is necessary to check the level of the pseudo-coefficients, in particular that of McFadden. It is for our

study of the order of 0.518. It is a satisfactory level. Furthermore, the Nagelkerke coefficient is 0.730, which means that the model explains 73% of the dependent variable (functional status). As for the coefficient of Cox and Snell, it is 0.613. (See table 2).

Table 1: Information on fitting the model

Model	Model Fitting Criteria		Likelihood Ratio Tests		
	-2 Log Likelihood	Chi-Square	Df	Sig.	
Intercept Only	319.142				
Final	144.230	174.912	30	.000	

Table 2: value of the pseudo coefficients

Cox and Snell	.613
Nagelkerke	.730
McFadden	.518

Finally, reading the table "information on the model" (see table 3), shows that the criteria AIC (Akaike Information Criterion) and especially BIC (Bayesian Information Criterion) (most demanding criterion) are better in our model than those of the trivial one. This consolidates the validity of our model.

Table 3: Information on fitting the model

Model	Model Fitting Criteria			Likelihood Ratio Tests		
	AIC	BIC	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	323.142	329.571	319.142			
Final	208.230	311.108	144.230	174.912	30	.000

It seems that our model meets the conditions of validity, we move on to reading the results.

Interpretation of Results

We will verify the explanatory part of the variables studied through testing their significance. We are going to set up the following hypothesis test:

H0: the coefficient is zero in all the equations versus

H1: on at least one of the equations, it is different from zero,

Reading Table 4, it shows that, except for the two variables "activity sectors" and "household size", the other variables are globally significant at the risk of 10%.

Table 4: Level of significance of the explanatory variables

Effect	Likelihood Ratio Tests		
	Chi-Square	Df	Sig.
Intercept	.000	0	.
Household size	.785	2	.675
Age	32.729	8	.000
Marital status	12.010	6	.062
Instruction level	31.324	6	.000
Fatheremploymentstatus	13.871	2	.001
Current job satisfaction	62.818	2	.000
Place of birth	6.992	2	.030
Activity sector	7.767	4	.101

Comparison between the status of “informal employee” and the status of “formal employee”

Reading Table 5 (see Appendix 1) reveals that the variables: "age", "level of education", "father's occupational status in relation to the informal sector", "satisfaction with current employment", "the place of birth "and" sector of activity "are statistically associated with occupational status, at a risk level of 5%. The equation of the model can be written like this: $\ln [p (\text{formal employee} / p (\text{informal employee})) = -2.696 + a \text{ age} + b \text{ level of education} + 1.165 \text{ occupational status of the father outside the informal sector} - 3.538 \text{ non-satisfaction with current job} + 1.163 \text{ place of birth outside Casablanca} + 1.185 \text{ sector of activity (trade)}$.

With $a = 2.790$ if the age group is less than 31 years; $a = 3.103$ if the age group is between [31 years old, 41 years old [; $a = 4.325$ if the age group is between [41 years old, 51 years old [.

And $b = 0.210$ if the level of education is none. In other words, all other things being equal:

- The variable of the occupational status of the father when the latter works outside the informal sector increases the chances of 4.78 of these women to be a formal employee (compared to an informal employed woman);
- Non-satisfaction with the current job lowers the probability of 0.029 that it is a formal employed woman (compared to an informal employed woman);
- Being born outside the Grand Casablanca region multiplies by 3.198 times the chances for a woman to be a formal employee than to be an informal employee;
- The trade sector multiplies the chances of 3.272 that the employed woman is a formal employee (than an informal employee);
- The age of working women increases the probability that they are formal employees (than informal employees). In fact, as age increases, this probability increases. It multiplies by 16.275 times for ages under 31 years, by 22.258 times for the age group between 31 and 41, and by 75.792 times for the age group between

41 and 51 years;

□ The absence of an education level decreases by 0.210 times the chances of an active working woman to be a formal employee.

Overall, in comparison to formal wage earning, informal working women in Casablanca are much more likely to be very young women, with a low level of education, born in the Grand Casablanca region, with the father operating in the informal sector, working outside the trade sector and dissatisfied with their current job.

Comparison between the status of “informal employee” and that of “informal self-employed”

If we take a risk level equal to 10%, the occupational status is significantly linked to the variables: "age", "marital status", "education level", "satisfaction with current status". (see appendix 2).

The equation of the model can be written like this:

$\ln [p(\text{informal self-employed}) / p(\text{informal employee})] = -2,034 + a \text{ age} + b \text{ level of education} + c \text{ marital status} - 3,456 \text{ non-satisfaction with current employment.}$

With $a = 3.693$ if the age group is between [41 years old, 51 years old].

And $b = 3.301$ if the level of education is primary.

And $c = 3.073$ if the woman is single or $c = 3.162$ if the woman is divorced. These results can be commented as follows:

Having an age between 41 and 51 years increases the chances of an active woman by 40,168 times to be an informal self-employed (compared to an informally employed woman), when all the other variables are constant;

□ The chances of a woman having a primary education increases her probability of 22,226 to have the occupational status "independent informal" than to be an informal employee, all other things being equal;

□ Unmarried and divorced women see their probabilities multiply by 21.597 and 23.616 respectively to be informal self-employed (than informally employed women).

A macroeconomic reading of informal employment

The precariousness of the female employment status of women in Casablanca in its microeconomic dimension reflects a given macroeconomic context of employment. It also showcases a Moroccan economy characterized by significant job shortages (high unemployment among young urban dwellers, discouraged workers, low rate activity) and in quality (vulnerable employment, low income and informal employment in particular for unskilled workers, disparities of all kinds, etc.), combined with strong pressure from the labor supply (massive influx of young people into the labor market estimated at 400,000 per year, new migration policy consisting of the reception of African immigrants). In this regard, according to a report carried out by the ILO in 2014, activity rate in Morocco is one of the lowest in the world, especially due to the low participation of young people and women in the labor market. The female participation rate is one of the lowest in the MENA region, at 25% (18% in the cities and 36% in the countryside). Only a third of young people (15 to 24 years old) participate in the job market (44% in rural areas and 24% in urban areas). The result is a strong segmentation of the labor market with strong territorial (urban / rural and regional) and social (gender, education, age) disparities.

In the end, the notorious economic growth experienced by the Moroccan economy in recent years has clearly not been enough to solve the problems of unemployment and to limit job insecurity among women and young people.

The Moroccan public authorities must implement measures capable of reducing the spirit of informal entrepreneurship while strengthening that of formal entrepreneurship, by nurturing a culture of performance, by creating conditions favorable to economic progress, by improving the quality governance and by enhancing people's resources and capabilities.

Discussion

In this work, we have tried to examine the determinants of the occupational status of Moroccan women, based on the results of a survey carried out on a representative sample of women working in the Grand Casablanca region. We are nevertheless aware that this study should go beyond this aspect by seeking, among other objectives, to determine the (monetary) gains provided for each segment of the market which can give more meaning to the choice of different occupational statuses. This was a goal we set initially, but unfortunately the reluctance of the women interviewed vis-à-vis the questions which relate to the financial aspect obliged us to give up all question tackling the income and the financial aspect of the respondents. In addition, other variables could have brought more information to our study such as the degree of knowledge of employment law among informal employees and self-employed workers and the obligations of bosses towards their employees. These elements would have made it possible to assess the cognitive abilities of women, especially among informal employees and informal self-employed.

Conclusion

All the studies carried out on female activity and employment in Morocco showcase the glaring precariousness of the status of Moroccan women with regard to employment: mainly illiterate, rural and housewives. They combine disabilities with employment, as evidenced by the decline in their participation rate, which is far below the level of OECD countries over the 2000-2010 period. Regarding informal female employment which can constitute an escape from unemployment for certain Moroccan women, the situation is even less comfortable than that of men. Women are only a minority of the UPI (less than 9% in 2013), with generally more precarious conditions than those of men, with a predominance of jobs in more arduous and less remunerative activities and often without social protection. As for the determinants of informal female workers in Morocco, the results of our study on the occupational status of Casablancans, reveal a significant influence of the age variable; the older a working woman is, the less likely she is to be in informal employment, which means that younger women are more destined for informal employment, all other things being equal. As for the level of education, the improvement of the level of education proves to multiply the chances of an active woman to be in the formal wage earning. As a result, the informal jobs are reserved for women with a low level of education, *ceteris paribus*. Moreover, the results of the ENE 2012 show that the activity rate in the informal sector (family supporters, in particular) of women is much higher among women with no level of education than among women who have higher diplomas. Women without any level of education are more in informal jobs (75% of women with a primary level and less are employed in the informal sector), a sector in which access conditions remain relatively less restrictive in terms of competence and qualification. In this regard, having a diploma increases the chances of accessing a job providing medical coverage (guaranteed almost exclusively in the formal sector). Thus, the share

of employed workers affiliated with a health insurance system goes from 4.1% for non-graduates to 81.2% for graduates of higher level.

In short, the comparison between the status of “informal employee” and the two other occupational statuses “formal employee” and “formal self-employed” corroborates the precariousness of informal wages in Morocco, widely highlighted by previous surveys and research. Indeed, according to our study, this status is dedicated to very young women, poorly educated, born close to their job, and who ultimately aspire to a better status than their current one. This study also reveals that informal wage earning can only be difficult to associate to an occupational choice. In the end, through analysis of the occupational status of Casablanqan women, the precariousness of the status of women in the labor market shows that despite the political will displayed to improve the status of Moroccan women and improve their conditions, and despite the efforts made over the past two decades in terms of legislation to protect the rights of women and promote their role in society, it must be noted that these reforms have not, or at least have not yet produced the expected results. This entails that other efforts must also be made in the education and training of women to make them better equipped to meet the challenges of the labor market. Efforts are equally needed to raise awareness among all the components of the society about the important role of women in the development project to which Morocco has recently signed up, starting with the Moroccan Woman herself.

Appendix1: Estimated parameters for formal employees (informal employee reference method)

Occupational status of the woman ^a	B	Std. Error	Wald	df	Sig.	Exp(B)
Intercept	-3.022	1.638	3.404	1	.065	
Household size	.123	.203	.369	1	.544	1.131
[age=1]	2.844	1.180	5.810	1	.016	17.192
[age=2]	3.121	1.189	6.895	1	.009	22.678
[age=3]	4.397	1.279	11.826	1	.001	81.220
[age=4]	1.303	1.236	1.111	1	.292	3.681
[age=5]	0 ^b	.	.	0	.	.
[Marital status=1]	.731	1.096	.446	1	.504	2.078
[Marital status=2]	1.093	1.005	1.183	1	.277	2.984
[Marital status=3]	1.437	1.298	1.226	1	.268	4.208
[Marital status=4]	0 ^b	.	.	0	.	.
[Education level=1]	-1.592	.866	3.384	1	.066	.203

[Education level=2]	-2.027	1.395	2.113	1	.146	.132
[Education level=3]	1.785	1.531	1.360	1	.244	5.962
[Education level=4]	0 ^b	.	.	0	.	.
[Father's occupational status=0]	1.617	.508	10.148	1	.001	5.040
[Father's occupational status=1]	0 ^b	.	.	0	.	.
[Father's occupational status=0]	-3.599	.583	38.054	1	.000	.027
[Current job satisfaction=1]	0 ^b	.	.	0	.	.
[Place of birth=0]	1.191	.517	5.304	1	.021	3.291
[Place of birth=1]	0 ^b	.	.	0	.	.
[Sector of activity=1]	.787	.712	1.224	1	.268	2.198
[Sector of activity=2]	1.183	.609	3.774	1	.052	3.265
[Sector of activity=3]	0 ^b	.	.	0	.	.

a. The reference category is informal employee.

b. This parameter is set to zero because it is redundant.

Appendix 2: Parameters estimated for the informal self-employed (informal employee reference method)

Occupational status of the woman ^a	B	Std. Error	Wald	df	Sig.	Exp(B)
Intercept	-2.842	2.893	.965	1	.026	
Household size	.359	.463	.602	1	.438	1.432
[age=1]	-1.181	2.396	.243	1	.622	.307
[age=2]	1.368	2.259	.367	1	.545	3.929
[age=3]	4.046	2.214	3.340	1	.068	57.192
[age=4]	-19.799	.000	.	1	.	2.519E-009
[age=5]	0 ^b	.	.	0	.	.
[Marital status=1]	3.464	1.913	3.280	1	.070	31.952
[Marital status=2]	-.485	1.825	.071	1	.790	.616

[Marital status=3]	3.095	1.763	3.080	1	.079	22.078
[Marital status=4]	0 ^b	.	.	0	.	.
[Education level=1]	-1.640	1.538	1.137	1	.286	.194
[Education level=2]	3.088	1.845	2.800	1	.094	21.932
[Education level=3]	1.591	2.146	.549	1	.459	4.907
[Education level=4]	0 ^b	.	.	0	.	.
[Father"soccupationalstatus=0]	-.511	1.070	.228	1	.633	.600
[Father"soccupationalstatus=1]	0 ^b	.	.	0	.	.
[Current job satisfaction=0]	-3.706	1.081	11.763	1	.001	.025
[Current job satisfaction=1]	0 ^b	.	.	0	.	.
[Place of birth=0]	-.307	1.025	.089	1	.765	.736
[Place of birth=1]	0 ^b	.	.	0	.	.
[Sector of activity=1]	.911	1.232	.546	1	.460	2.487
[Sector of activity=2]	-.953	1.353	.496	1	.481	.386
[Sector of activity=3]	0 ^b	.	.	0	.	.

a. The reference category is: informal employee.

b. This parameter is set to zero because it is redundant

Bibliography

Andrews, D., A. Caldera Sánchez and Å. Johansson (2011), "Towards a Better Understanding of the Informal Economy", *OECD Economics Department Working Papers*, No. 873, OECD Publishing.

Bureau International du Travail, Rapport global : Etude de Diagnostic sur la Situation de l'Emploi au Maroc : préalable à la formulation de la stratégie nationale de l'emploi. 2014.

Bellache , Y., P. Adair et M.Bouznit(2014), "[Secteur informel et segmentation de l'emploi à Bejaia \(Algérie\): déterminants et fonctions de gains](#)," *Mondes en développement*, De Boeck Université, vol. 0(2), pages 31-44.

- Benjamin, N. et A. Mbaye (2013), “Les Entreprises Informelles de l’Afrique de l’Ouest Francophone : Taille, Productivité et Institutions”, Banque Mondiale.
- Bertrand, G., R. M. Lontchi et V. Fotzeu (2005), “Les Caractéristiques et Déterminants de l’Emploi des Jeunes au Cameroun”. In Cahier de la Stratégie de l’Emploi. *Département de la Stratégie en Matière d’Emploi*. Yaoundé : Unité Politique de l’Emploi.
- BIT (1993a), *Statistiques de l’Emploi dans le Secteur Informel*, Rapport pour la XVème Conférence Internationale des Statisticiens du Travail, Genève 19-28 Janvier 1993, BIT.
- BIT** (1993b), *Rapport de la Conférence, Rapport pour la XVème Conférence Internationale des Statisticiens du Travail*, Genève 19-28 Janvier 1993, BIT.
- Combarnous, F. (1999), “La Mise en Œuvre du Modèle Logistique Multinomiale Emboîtée dans l’Analyse de la Participation au Marché du Travail”, Centre d’Economie du Développement, Université Montesquieu Bordeaux IV-France.
- Charmes, J. (2002), “Les Origines du Concept de Secteur Informel et la Récente Définition de l’Emploi Informel”. Washington DC, Banque Mondiale.
- Charmes, J. (1994), “L’emploi Informel, un Concept Utile, Même en Pays „développé””, *Courrier des statistiques* n° 70, juin, pp. 39-43.
- El Aynaoui, J. (1997), “Participation, Choix Occupationnel et Gains sur un Marché du Travail Segmenté”, une Analyse Appliquée au Cas du Maroc. Centre d’économie du développement, Université Montesquieu Bordeaux IV-France.
- Gherbi, H. (2014) , “Caractéristiques et Déterminants de l’Emploi Informel Féminin en Algérie. Le Cas de la Wilaya de Bejaia”, *Revue Monde en Développement*, numéro 166, pp 45-58.
- Ghewy, P. (2010), “Guide Pratique de l’Analyse de Données”. De boeck, Bruxelles.
- Hammouda N., et M. Lassassi (2009), “Déterminants de la Participation au Marché du Travail et du Choix Occupationnel : une Analyse Micro Econométrique Appliquée au Cas de l’Algérie”, GDRI DREEM Workingpaper.
- Haut-Commissariat au Plan, *Enquête Nationale sur le Secteur Informel 2013-2014, Principaux Résultats*, 2016, Maroc.

Haut-Commissariat au Plan, *Femmes Marocaines et Marché du Travail : Caractéristiques et Evolution*, 2013, Maroc. Haut-Commissariat au Plan, *Enquête Nationale sur le Secteur Informel*, 2006-2007, Maroc.

Haut-Commissariat au Plan, *Enquête Nationale sur le Secteur Informel*, 1999-2000, Maroc.

Haut-Commissariat au Plan, *Annuaire Statistique des Régions*, 2010, Maroc.

Johansson, E. (2000), "Self-employment and the Predicted Earnings Differential-Evidence from Finland". *Finnish Economic Paper*, 13 pp. 45-55.

Mejjati Alami, R. (2006), "Le Secteur Informel au Maroc: 1956 – 2004", Cinquante Ans de Développement Humain au Maroc.

Perry, G. (2007), "Informality: Exit and Exclusion", World Bank Latin American and Caribbean Studies. Washington, DC: World Bank.

Rakotomalala, R. (2011), "Pratique de la Régression Logistique. Régression Logistique Binaire et Polytomique", Université Lumière Lyon, 2.

Roubaud, F. (2009), "La Production Statistique sur le Secteur Informel en Afrique : Quels Enseignements et Quelles Perspectives ?", *The African Statistical Journal*, Volume 9: 399-421.

Sboui, F. (2006), "Le dualisme du marché du travail en Tunisie : choix occupationnel et écart salarial". *Economie & prévision*, 174(3), 21-37.

Thai, M. T. T., and E. Turkina (2014), "Macro-level Determinants of Formal Entrepreneurship Versus Informal Entrepreneurship". *Journal of Business Venturing*, 29(4), 490-510.

Traorét, J. A. (2013), "Les Déterminants du Secteur Informel au Burkina Faso", Communication Colloque Université Paris-Est.

Williams, C. C. et Round, J. (2007). "Entrepreneurship and the Informal Economy: A Study of Ukraine's Hidden Enterprise Culture". *Journal of developmental entrepreneurship*, 12(01), 119-136.