

# Women's Economic Empowerment through Microfinance Services in Tunisia

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Enda inter-arabe

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**Abstract.** This paper aims to address the issue of women's economic empowerment through microfinance services. The innovative dimension lies in the definition of the concept of "economic empowerment", as it will be more linked to the business development process rather than to the client's socioeconomic characteristics. Our findings suggest that initial differences in entrepreneurial profiles of women and men are determinant in business development process. The gender identities, roles and responsibilities, and limited social support and network constitute a major obstacle to the development of women's micro-businesses. Moreover, women are spending a colossal proportion of their income on household well-being. As result, they do not have enough money to reinvest in their businesses. On the other hand, our results show that, *ceteris paribus*, microfinance has supported women's project developments compared to men. However, policy makers should consider establishing state agencies and market regulations specifically addressing women's needs. To support the role of microfinance, they can initiate, to the provisions of MFIs, a guarantee fund for women micro-entrepreneurs.

**JEL classification:** G21; G23; L26; C12; C13

**Keywords:** microfinance, women economic empowerment, entrepreneurship, econometric modelling

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## 1. Introduction

Since its inception, microfinance aims to promote financial inclusion; offering a set of products (e.g. credit, insurance, saving and money transfer) dedicated to people excluded from official financing systems and formal banking system, and especially women living in developing countries. As a matter of fact, those women are the most disadvantaged in terms of access to credit, and more likely to work in the informal sector.

According to Morduch and Aghion (2010)<sup>1</sup>, microfinance is even considered as a financing system specifically conceived for women. Furthermore, targeting women has been, for a long time, considered as a way to maximize social and financial performances by microfinance institutions (MFIs): (1) better recovery rates, (2) lower mobility, (3) more fearful of social sanctions, and (2) higher risk aversion.

Microfinance is certainly one of the most relevant tools to foster financial inclusion, reduce unemployment and support women's economic empowerment, which are major stakes in developing countries, and especially in the Middle East and North African (MENA) region which has one of the lowest women labor participation rate, and weakest rates of financial inclusion in the world, with only 18% of adults (13% for women) having a bank account in a formal institution. However, microfinance in the region is today considered as the least developed in the world. We report only 1,8% of adults getting a loan from an MFI<sup>2</sup>.

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<sup>1</sup>AGHION B., MORDUCH J. (2010), *The Economics of Microfinance*, MIT Press.

<sup>2</sup> Data from Sanabel network.

In Tunisia, for instance, the labor force participation among women remains around 26%, against 50% in the world and above 60% in low income countries<sup>3</sup>. The unemployment rate is more significant among women (21,6% in the first semester of 2015) than men (12,5%), and even more palpable among recent graduates (39% for women against 20,8% for men). Concerning financial inclusion, with 32%<sup>4</sup> of adults (25% for women) having a bank account, Tunisia stands above the MENA region average (18%), though still below the world average (50%).

On the eve of revolution, statistics paint an alarming picture that prompts structural reforms. Seeing microfinance as incontestable tool to improve financial inclusion, reduce unemployment and eradicate poverty, Tunisian authorities have undergone profound regulatory changes, aiming to foster the development of the sector. Since, new supervising institutions and policies are being drafted.

In this context, new actors are entering the sector: whereas the MFI Enda inter-arabe used to have the monopoly on the whole territory as the only NGO authorized to grant micro-credits, several international organizations have started their activities since 2014. The new supervising institution of the sector, the Microfinance Control Authority (MCA), aims at drafting regulations and recommendations, and is eager to be provided with more studies in order to work with full knowledge of the facts. MCA especially plans to consider the gender issue in their work, as needs may differ between men and women concerning microfinance services.

Till now, very few studies have been led on microfinance in Tunisia compared to other countries in the region, such as Morocco for instance; this is due to a weak development of Tunisian microfinance sector and the lack of access to data. However, with the current development of microfinance in the country, it seems necessary to contribute to the knowledge production about this topic.

This study focus on how microfinance enables micro-entrepreneurs to develop their business, and, especially, on how gender influences this process. Otherwise, does microcredit support economic empowerment through business development to the same extent for male and female entrepreneurs? In other words, on the first hand, is gender a determining factor in the growing process of a business led by a client of a microfinance institution (MFI)? On the other hand, do the determining factors in the growing process of a business differ between male and female clients?

As for the policy implications, it explores the main obstacles to women's businesses growth, which would bring very useful knowledge especially for policy makers, as policy can play an important role in the improvement of quantity and quality of entrepreneurs (Vincent, 2012). Actually, in countries where microfinance policies are still being elaborated or could evolve, such as Tunisia for instance where a new institution regulating the microfinance sector is being created and is eager to include the gender issue into its policies, such a study may also give some insight for the draft of future recommendations to the actors of the sector or even for the creation of specialized agencies which would support the sector.

The structure of the paper is as follow. Section 2 covers the main literature and theories on gender and microfinance, and more specifically the impact of microfinance on women empowerment. Section 3 presents our methodological framework. Main findings and discussion are reported in Section 4. Section 5 concludes.

## 2. Literature Review

The concept of "empowerment" can be understood and defined in many ways, which explains the variety of results of microfinance impact assessment studies. Microfinance has been rapidly promoted as a way to fight against poverty, as a result, a lot of impact assessment studies focused on how microfinance could contribute to reduce poverty and increase revenues. As women are the main target public of microfinance services, a specific attention has been paid to the impact of lending to women instead of men in terms of poverty reduction and welfare improvement; a number of studies in Africa, Latin America and South Asia have shown that women spend a greater proportion of their income than men on household well-being, as the study led by Khandker

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<sup>3</sup> World Bank (2013), *Opening Doors : Gender Equality and Development in Middle East and North Africa Region*, Washington D.C.

<sup>4</sup> ADA (2014), *Etude sur l'inclusion financière en Tunisie*, MicroMed program in Tunisia.

(2003)<sup>5</sup> for instance. About the idea of “empowerment”, Hashemi and al. (1996)<sup>6</sup> showed that in some cases, women gain in decision power.

However, on the contrary, it has also been shown that targeting women may also have negative effects: women can simply be used as intermediaries to get the loan whereas men are the real recipients; or women may finally have very little control only on these new resources once the loan granted, as proved by Goetz and Sen Gupta (1996)<sup>7</sup>. To get a loan may also increase their workload and even domestic conflicts, as mentioned by Isabelle Guerin (2009)<sup>8</sup>; it may even increase women’s dependency on men instead of fostering their “empowerment”, when their activities are very specialized and take place at home, maintaining their isolation and their need for men to get inputs and to sell products.

Thus, there is no consensus about the impact of microfinance on women’s “empowerment”, as “empowerment” may be understood through its economic, social and political dimensions, and through various indicators not necessarily evolving alongside, such as resource control, decision power, mobility, available revenues and welfare, etc., as the scheme drafted by IFAD (2009)<sup>9</sup> about the virtuous spiral of women’s empowerment through microfinance illustrates. However, an important dimension of “empowerment” seems to lack of precision in the scheme, which is the ability of the microfinance client to go out from the household in order to work autonomously in an independent place. Indeed, especially the part of the scheme concerning economic empowerment does not give precisions about where the phenomena contributing to the virtuous spiral (increased productivity and investment, increased access to markets...) lead the client. It could be questionable to assert that there is “empowerment” if the microfinance client finally stays at home to lead what is called an “income generating activity”, or at least that this kind of “empowerment” is satisfying enough. On top of that, it is generally claimed that women’s economic empowerment can make significant contributions to the macro level by turning women into agents of economic growth, as the report by IFAD does, but there is very few studies concerning the process which can result in this phenomenon.

This leads us to consider the link between gender, entrepreneurship and microfinance, and more specifically to study the contribution of microfinance to the dynamic process of entrepreneurship. Then, we choose to consider economic empowerment through business development process, and to characterize business development process through 2 aspects, which are the location of the project (at home or into independent premises) and its formality (officially registered or not). Thus, we consider that going out from the household to work independently and more formally is a significant step in the empowerment process. Such a definition of the concept of economic empowerment by making the link with the entrepreneurial dimension is very innovative, to the best of our knowledge.

About the link between microfinance and entrepreneurship, as explained by Guy Vincent (2005)<sup>10</sup>, the lack of access to credit in developing countries fuels the “vicious circle of poverty”, defined by the phenomenon of low productivity which engenders low per capita income, which leads to low savings, which enable only local capital accumulation, perpetuating low productivity, etc. Still, Vincent considers that entrepreneurship has a role in reducing poverty, and specifies that in least developed countries, microenterprises are determining in economic growth, social stability and equity. If they are successful, these micro-enterprises are supposed to turn into small and then medium enterprises, which are the most dynamic segment of these countries and the most likely to reduce poverty. Microfinance is supposed to foster poor people entrepreneurship and then to contribute to this process. However, the question of gender in this process is not addressed in Vincent’s statement.

Yet, it has been shown that male and female clients of microfinance do not have the same profile: women are generally poorer than men (ILO, 2007)<sup>11</sup>, tend to create smaller firms (Agier and Szafarz, 2011<sup>12</sup>), and are thus

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<sup>5</sup> KHANDKER (2003) in AGHION B., MORDUCH J. (2005), *The Economics of Microfinance*, MIT Press.

<sup>6</sup> HASHEMI, M., SCHULER S., RILEY A. (1996), “Rural credit programs and women's empowerment in Bangladesh”, *World Development*, vol 24, issue 4, avril.

<sup>7</sup> GOETZ A., SEN GUPTA R. (1996), “Who takes credit? Gender, Power, and Control Over Loan Use in Loan Programs in Rural Bangladesh”, *World Development*, vol. 24, n° 1: 45-63.

<sup>8</sup> GUERIN I., PALIER J., PREVOST B. (2009), « Femmes et microfinance : espoirs et désillusions de l’expérience indienne », BIM #8, December.

<sup>9</sup> IFAD (2009), « Gender and rural microfinance : reaching and empowering women », Rome.

<sup>10</sup> VINCENT G. (2005), « Sustainable Microentrepreneurship : the Role of Microfinance, Entrepreneurship and Sustainability in Reducing Poverty in Developing Countries ».

<sup>11</sup> ILO (2007), « Les femmes et la microfinance », publication of the International Labor Organization, Geneva.

more likely to stay at home to lead an income generating activity. Thus, the entrepreneur profile differs between men and women, which means that generally speaking, men and women do not start from the same point as microfinance clients. It seems then necessary to study how microfinance supports men and women's project developments.

However much knowledge lacks on this specific question. The Gender Baseline Survey about Morocco from 2005 by Women's World Banking<sup>13</sup> gives some insight: the study concludes that Moroccan women's micro businesses are less likely to grow than those of Moroccan men. Few women earn enough money to reinvest, as they use their business incomes to cover household's expenses. According to the study, this would be due to the traditional gender identities and gender roles, according to which women are not supposed to work but to be the homemaker, which limits women's ability to grow their businesses, and maintains them in some specific activities at home. The main obstacle to the growth of women's businesses is the lack of time, as they still have to shoulder the same domestic responsibilities, even though they have this new business to manage. It would be a shame if men fulfil any of their household duties. On top of that, these gender roles result in the limitation of women's level of autonomy, mobility, choice of business and location of business; the study also reveals that there are different spending and saving patterns according to gender, as women undergo more pressure to divert resources from their businesses to their families, and as they are responsible for savings in case of emergencies, even though both men and women save. This combination of factors necessarily has a negative impact on women's ability to grow their activity. As a result, women have smaller size businesses in terms of net monthly profit and value of assets than men. The study shows that these gender roles and responsibilities are integrated by both men and women.

Thus, this report gives significant insight about the processes which can explain the differences between male and female microfinance clients in terms of business growth. However, this study was based on qualitative methods, as it used individual interviews and focus group discussions. To the best of our knowledge, there is no quantitative study focusing on the possible differences of business growth between male and female microfinance clients, and on the factors which could foster or on the contrary impede business growth according to gender.

### **3. Methodological Framework**

#### **a. Data**

In order to monitor the business development process of Enda inter-arabe clients, a random sample was drawn from a population of 37 986 Enda inter-arabe's new clients, who have requested their first loan after June 2012 and who at least have been granted a second loan before May 2015.

Data about sampled clients' socioeconomic profile, business project and loan were gathered from the information system of Enda inter-arabe; providing information on micro-credit (requested amount, granted loan size, number of instalments, financial product), business development process (business sector, detailed activity, value of assets, monthly benefits, activity location in independent premises or not, official registration or not, etc.) and other variables of interest concerning the client's profile (gender, age, household size, educational background, socio-professional category, monthly expenses and revenues, etc.) and his/her financial situation (indebtedness, household's other sources of revenues, etc.). This data was consolidated thanks to archive search, allowing to track down additional household variables (number of working household's members, number of dependents), project age and information about the trainings the client may have followed and which could have been useful for his/her business development.

#### **b. Econometric Framework**

In this study, the business development process might be influenced by individual, household, project and loan variables, which will be the independent variables. The business development process, supposed to illustrate the

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<sup>12</sup> AGIER I., SZAFARZ A. (2011), "Credit to Women Entrepreneurs: The Curse of the Trust worthier Sex », Working Papers CEB 11-005, ULB -- Université Libre de Bruxelles.

<sup>13</sup> WOMEN'S WORLD BANKING (2005), « Gender Baseline Survey : Household Resource Allocation and the Capacity of Poor Women to Grow their Businesses in Morocco », New York.

empowerment process, will be defined through two variables, which are the location of the activity within independent premises on the one hand, and the official registration on the other hand.

We used a multinomial logit model written in terms of the probabilities of being in stage *i* at the end of the study, given the departure stage of the project in June 2012, where the state "no independent premises or independent premises at home, and non-officially registered" is picked as a baseline or reference cell. Thereafter, we calculate probabilities for all other development stages relative to this baseline, and then let the probabilities be a linear function of predictors. The other two possible stages will be: (1) independent premises outside home and non-officially registered, and (2) independent premises at home or outside home and officially registered.

#### 4. Results and Discussions

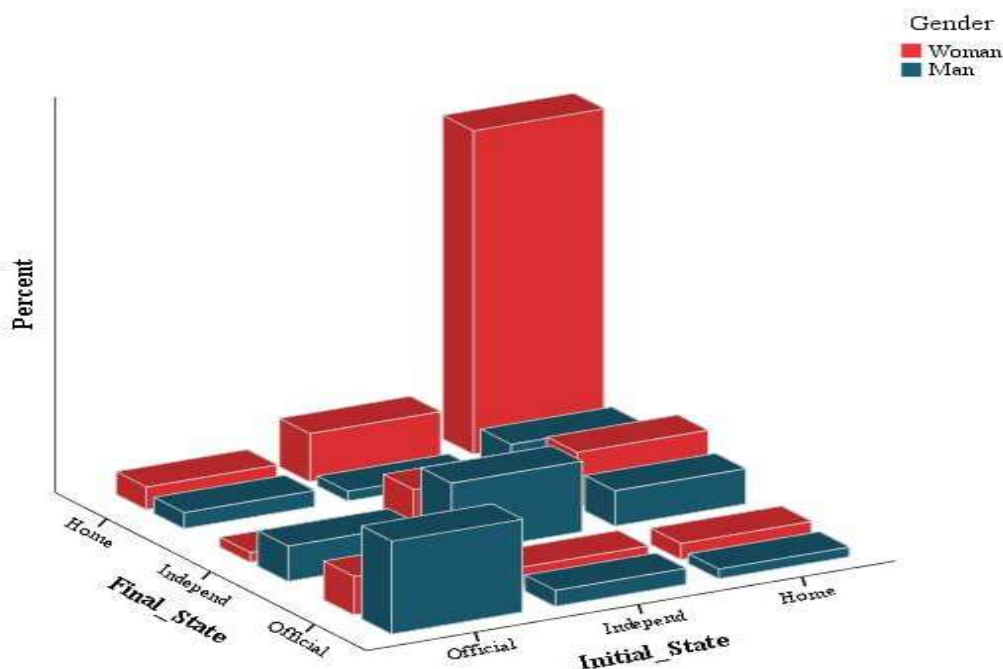
In this section, we compare women and men's business development process, but also their individual, household, project and loan characteristics. As shown in Table 1, we report that, unlike men, 70% of women run within home premises' activities. This situation remains unchanged even after receiving microcredit. We report only less than 1% additional patency for women. On the other hand, near 80% of men had within independent premises activities, and 45% were running an officially registered business. However, we observe an 8% regression of the total number of officially registered businesses, and a 14% increase in the total number of outside-home projects.

**Table 1 :Business Development Process**

Variable	Level	Women	Men
Initial State	Home	69.96	23.96
	Independent Premise	19.37	31.47
	Officially Registered	10.67	44.57
Final State	Home	70.01	17.52
	Independent Premise	18.47	45.67
	Officially Registered	11.52	36.81

Figure 1 depicts the preponderance of women among Enda inter-arabe clients, as they represented 67% of clients in December 2014. It also suggests a higher concentration of women's projects within home premises, even after benefiting from microfinance services. On the other hand, we observe the tendency of men to engage outside-home and officially registered activities.

**Figure1 : Business Development Process : Women vs. Men**



More than 83% of women keep working within home premises. Yet, women, having within independent premises or officially registered businesses, have regressed and engaged home activity, respectively 44% and 32% (See Table 2). Moreover, near half of officially registered businesses run by women have no longer patency, against 35% for men. This may be explained by the economic turmoil, the social unrest, and the political instability that experienced Tunisia on the eve of revolution and during the transition period. In addition, we report 28% new patency for men, against 21% for women.

Besides, only 11% of men running an outside home business, get engaged in within home activity, while 47% of men that have been initially engaged in within-home activities, have been running an outside-home businesses.

**Table 2 : Business Development Process : Women vs. Men**

Initial State	Final State	Women	Men
Home	Home	83.05	40.62
	Independent Premise	13.70	47.38
	Officially Registered	3.25	12.00
Independent Premise	Home	44.05	11.18
	Independent Premise	38.29	72.78
	Officially Registered	17.66	16.04
Officially Registered	Home	31.62	9.57
	Independent Premise	13.76	25.61
	Officially Registered	54.62	64.82

According to Table 3, women and men have almost similar distributions as regards to their individual initial characteristics. However, women are more likely to be illiterate, married or inactive. They are also less likely to own their own homes or to be insured. All this suggest greater vulnerability of women, compared to men, which could explain the reason why women tend to create smaller firms and to engage in income generating activities.

**Table 3 : Initial Individual Characteristics : Women vs. Men**

Variable	Level	Women	Men
Marital Statute	Not Married	25.22	27.58
	Married	74.78	72.42
Education Level	Illiterate	5.23	1.44
	Primary	43.07	47.11
	Secondary	44.77	47.07
	Tertiary	6.92	4.37
Homeownership	No	31.05	25.77
	Yes	68.95	74.23
Insurance	No	24.00	22.58
	Yes	76.00	77.42
Actual Main Occupation	Agricultural Worker	0.58	2.55
	Craft Trade	54.29	48.26
	Public Sector	1.70	0.45
	Employer	13.04	15.17
	Farmer	5.33	2.65
	Inactive at Home	2.75	0.00
	Liberal	15.41	25.52
	Non-agricultural Worker	5.14	3.03
	Retired	0.00	1.24
	Unemployed	1.75	1.13

From Table 4, we note that women are more likely to have seasonal and/or near-home activities or to run personal care, clothing, and food production businesses. On the other hand, men are more likely to work on construction and repair, services, food trade, or transport sectors. They are also less likely to have seasonal or within home activities.

**Table 4 : Initial Characteristics of Financed Project : Women vs. Men**

Variable	Level	Women	Men
Seasonality	No	97.86	100.00
	Yes	2.14	0.00
Financed Activity	Personal Care	6.09	0.87
	Agriculture†	0.46	3.25
	Construction and Repair	0.54	16.10
	Other	0.60	0.91
	Clothing Production	24.94	2.05
	Food Production	8.12	3.96
	Other Production	1.70	4.26
	Services	2.47	8.25
	Other Services	0.91	0.89
	Clothing Trade	35.69	12.13
	Food Trade	9.74	21.63
	Other Trade	4.66	7.48
	Transport	0.30	14.55
Project Close to Home	No	7.12	30.54
	Yes	92.88	69.46

Although most clients look for working capital, men have looked twice more for co-funding than women. The latter are slightly more in need of initial capital and looking forward to an investment. Besides, Table 5 reports women to be more likely to resort to mutual guarantee and solidarity group, unlike men who instead opt for caution on salary or guarantor. This may be explained, on the one hand, by greater solidarity among women than men, and, on the other hand, by large social network and social support for men.

**Table 5 :Loan Application: Women vs. Men**

Variable	Level	Women	Men
Microcredit Use's Details	Cofunding	5.25	10.23
	Creation and Investment	12.82	11.19
	Living Conditions	2.64	2.15
	Working Capital	79.29	76.43
Guarantee	Ancient Client	31.86	35.78
	Caution on Salary	31.77	44.78
	Collateral Materials	0.56	0.00
	Historic	2.91	3.62
	Mutual Guarantee	30.06	15.82
	Parental Involvement	0.58	0.00
	Solidarity Group	2.26	0.00

†Second activity

At loan application, 2.3% of women have professed the need for entrepreneurship support, training and networking, against only 1.2% for men. By the end of the programme, 3.9% of women and 3.1% of men have benefited from professional and/or managerial training, and networking.

According to Table 6, women and men's households are sharing most of their financial and non-financial characteristics, with larger household incomes reported by women. However, we note that the households' expenses have increased 10 more times on women's side than for men. This could be explained by the fact that women are more likely to spend substantial amounts of their incomes on household well-being.

**Table 6 : Gender and Business Development Process : Initial vs. Final State  
Mean (Standard Deviation)**

Variables†		Woman		Man		All	
		Initial	Final	Initial	Final	Initial	Final
Household	Size	4,3 (4,2)	4,4 (4,2)	4,4 (4,4)	4,4 (4,4)	4,3 (4,3)	4,4 (4,3)
	Number of Children	1,7 (4,1)	1,7 (4,1)	1,7 (4,2)	1,7 (4,1)	1,7 (4,1)	1,7 (4,1)
	Number of Employed	1,6 (3,6)	1,6 (3,6)	1,3 (3,6)	1,4 (3,7)	1,5 (3,6)	1,5 (3,6)
	Number of Enda's Clients	0,2 (2,3)	0,2 (2,3)	0,1 (2,0)	0,2 (2,0)	0,2 (2,2)	0,2 (2,2)
	Revenue	806,655 (84,857)	889,272 (94,214)	639,468 (78,680)	648,388 (82,436)	751,929 (83,136)	810,736 (91,097)
	Expenses	544,445 (61,883)	637,152 (77,149)	617,700 (70,620)	627,656 (64,512)	568,424 (65,448)	634,056 (73,371)
Project	Total Fixed Assets	2162,688 (287,589)	2176,298 (290,797)	12796,677 (631,421)	16038,586 (815,873)	5643,524 (501,984)	6695,879 (637,430)
	Total Current Assets	2258,826 (284,263)	2271,771 (213,184)	4403,699 (320,655)	4998,184 (343,726)	2960,910 (299,633)	3160,675 (283,214)
	Capital	3843,452 (325,650)	3987,242 (294,057)	11670,436 (460,898)	15713,738 (527,445)	6405,468 (397,313)	7776,714 (434,802)
	Net Benefit Per Month	428,055 (77,150)	675,802 (131,409)	1075,774 (120,258)	1170,418 (103,175)	640,074 (102,131)	835,640 (124,539)
	Number of Employees	0,1 (1,8)	0,1 (2,1)	0,4 (3,4)	0,5 (3,7)	0,2 (2,7)	0,2 (3,0)
	Number of Seasonal Employees	0,0 (1,6)	0,0 (1,6)	0,0 (1,5)	0,1 (2,6)	0,0 (1,6)	0,1 (2,2)
Loan Application	Need	991,287 (103,527)	1073,202 (108,455)	1649,520 (119,361)	1897,537 (129,342)	1206,747 (112,185)	1343,032 (120,082)
	Contribution	171,895 (72,172)	167,124 (71,720)	231,767 (87,094)	277,413 (90,244)	191,493 (78,405)	203,225 (79,868)
	Requested Amount	928,599 (102,621)	1016,389 (106,782)	1570,022 (117,438)	1754,774 (122,261)	1138,557 (110,797)	1258,085 (115,623)
	Repayment Capacity	94,406 (26,502)	104,078 (29,450)	156,302 (37,444)	174,080 (38,444)	114,697 (32,458)	127,379 (34,359)
Micro-credit	Interest Rate	33,2 (5,3)	32,3 (8,0)	31,7 (7,1)	27,2 (7,8)	32,7 (6,2)	30,6 (8,3)
	Loan Amount	550,983 (76,220)	1087,461 (93,386)	904,384 (85,853)	1888,376 (116,183)	666,662 (81,723)	1349,625 (107,253)

† Amounts are in Tunisian Dinars

By comparing the characteristics of women and men activities, we note that businesses run by men had fixed assets 6 times greater than those run by women, a number of employees 4 times higher, a capital 3 times greater, and current assets and net-per-month benefit twice higher. Later, this has its impact on their businesses' needs and their own contributions to the business development. Men report needs and repayment capacity twice higher than women. All this may be explained by the nature and the industry of projects run by men, which require more equipment, compared to those run by women. Besides, the access to a specific microcredit product depend on the activity's financial characteristics, project development need and repayment capacity. This explains why women receive lower amounts, and, consequently, pay greater interest rates. In fact, they pay higher interest rates, because lower amounts are associated with higher risk levels and generate higher operational costs. By the end of the study, the gap between men and women activities has widened further.



Table 7 confirms previously trends observed. Furthermore, women report having more employed persons within their households than men, which may imply that women's businesses are not the main source of revenue for these households, but rather extra-revenues. This can be especially true for women engaged in home activities. Finally, Table 7 shows that men and women tend to have almost the same age and the same project maturity level at the moment of loan application.

**Table 7 :Household, Business and Microcredit Characteristics : Throughout the Programme  
Mean (Standard Deviation)**

Variablest		Woman	Man	All
Household	Average Expenses	592,773 (62,971)	613,788 (61,337)	599,624 (62,370)
	Average Revenue	845,704 (84,694)	624,944 (71,596)	773,729 (81,419)
Project	Average Fixed Asset	2152,220 (274,305)	13467,067 (562,819)	5870,745 (454,850)
	Average Current Asset	2276,482 (232,925)	4633,246 (323,586)	3051,012 (277,394)
	Average Capital	3994,621 (301,286)	13864,837 (493,595)	7186,109 (411,977)
	Average Net-per-month Benefit	573,549 (103,653)	1136,501 (103,406)	754,115 (105,548)
	Employment	0,1 (1,7)	0,4 (3,4)	0,2 (2,7)
	Seasonal Employment	0,0 (1,4)	0,1 (2,0)	0,1 (1,7)
Demand	Total Need	2502,614 (165,398)	4305,749 (187,223)	3092,836 (178,361)
	Total Contribution	417,970 (109,874)	610,055 (130,552)	480,845 (118,475)
	Total Demand	2319,889 (157,893)	4044,270 (181,745)	2884,332 (171,914)
Upon Adhesion	Age	38,9 (11,2)	38,4 (10,6)	38,7 (11,0)
	Age Project	4,5 (8,2)	5,2 (7,7)	4,7 (8,1)
	Length of Adhesion‡	1,7 (2,4)	1,7 (2,5)	1,7 (2,4)
Micro-credit	Average Interest Rate	32,5 (6,5)	28,9 (7,0)	31,3 (7,0)
	Total Cycle	2,5 (2,8)	2,5 (2,6)	2,5 (2,7)
	Total Loans	1996,931 (128,135)	3443,295 (158,716)	2470,371 (146,416)

† Amounts are in Tunisian Dinars

‡ Till 04/30/2015

After meticulous investigations, model comparison and tests lead us to retain the thereafter models: (1) all clients, without gender covariate, (2) all clients, with gender covariate, (3) women only, and (4) men only. Table 8 provides estimation results for each of these four models.

**Table 8 : Gender and Business Development Process  
Multinomial Logit Model**

Variable	Level	Final State	All		Women	Men	
			Without Gender	With Gender			
Initial State	Home	Officially Registered	-1.2641**	-1.1252*	-1.8111***	-1.7767	
		Independent Premises	-0.7188*	-0.2730	-0.7823	-0.5866	
	Independent Premises	Officially Registered	0.2400	0.3093	-0.3536	0.4029	
		Independent Premises	1.4196***	1.3602***	1.0458	1.3567*	
Initial Details of Credit Use		Officially Registered	n.s.	n.s.			
		Independent Premises	n.s.	n.s.			
Initial Financed Activity	Personal Care	Officially Registered	-1.8283	-1.4372			
		Independent Premises	-2.9812	-1.7384			
	Agriculture†	Officially Registered	-0.2103	-0.3259			
		Independent Premises	-17.7322	-18.7118			
	Construction and Repair	Officially Registered	-1.5316	-2.4628			
		Independent Premises	-2.4285	-3.7612			
	Other	Officially Registered	0.3390	-0.6251			
		Independent Premises	16.0732***	15.0768***			
	Clothing Production	Officially Registered	-2.3572	-1.9660			
		Independent Premises	-3.1391	-2.3828			
	Food Production	Officially Registered	-3.7813	-3.9217			
		Independent Premises	-4.4770	-4.9094			
	Other Production	Officially Registered	-0.4022	-0.0419			
		Independent Premises	-1.8685	-1.2678			
	Services	Officially Registered	1.5357	1.9910			
		Independent Premises	-0.5956	-0.2559			
	Other Services	Officially Registered	-3.2465	-2.7130			
		Independent Premises	15.0527	15.7622			
	Clothing Trade	Officially Registered	-2.4463	-2.3720			
		Independent Premises	-3.3285	-2.9255			
	Food Trade	Officially Registered	0.5220	0.8822			
		Independent Premises	-1.9950	-1.5337			
	Other Trade	Officially Registered	-2.4643	-2.8559			
		Independent Premises	-4.2319	-4.6317			
	Gender	Women	Officially Registered		-1.2233		
			Independent Premises		-2.5007**		
	Initial Number of Employed Household's Members		Officially Registered	n.s.	n.s.		
			Independent Premises	n.s.	n.s.		
Initial Repayment Capacity		Officially Registered	-12.5774*	-13.4677*	-0.7497	n.s.	
		Independent Premises	-13.7902**	-14.9950**	-16.0019**	n.s.	
Initial Number of Employees within the Project		Officially Registered	2.2041**	2.2708**			
		Independent Premises	1.7561*	1.6900*			
Initial Total Current Assets		Officially Registered	n.s.	n.s.	0.4950*	n.s.	
		Independent Premises	n.s.	n.s.	0.4863**	n.s.	
Initial Net Benefit per Month		Officially Registered	n.s.	n.s.	n.s.	n.s.	
		Independent Premises	n.s.	n.s.	n.s.	n.s.	
Period of Adhesion		Officially Registered	n.s.	n.s.	2.3566*	n.s.	
		Independent Premises	n.s.	n.s.	-0.7894	n.s.	
Total Disbursed Loans		Officially Registered	0.6137	0.6472	0.3610	n.s.	
		Independent Premises	0.8726**	0.8652**	0.7812**	n.s.	

<b>Intercept</b>	<b>Officially Registered</b>	-0.1012	0.6335	-7.1140***	n.s.
	<b>Independent Premises</b>	3.3840	4.7472*	-0.4091	n.s.
<b>AIC</b>	<b>Intercept Only</b>	53017.783		29243.091	n.s.
	<b>Intercept with Covariates</b>	30107.674	28430.145	19723.168	n.s.
<b>LR (Khi-Square)</b>		23010.1083***	24691.6374***	9547.9232***	4325.1738***
<b>Max-rescaled R-Square</b>		1.00	1.00	1.00	1.00

\* Significant at the 10% Level

\*\* Significant at the 5% Level

\*\*\* Significant at the 1% Level

† Second activity

n.s. Non-significant

Table 8 shows that, regardless of gender, initial state is determinant in business development process. For women, the fact of being engaged in within-home activities remains a major obstacle to the formalization of their businesses. Furthermore, women are less likely to set their businesses apart, or at least far, from their homes. Women are 12 times less likely to settle in independent local away from home, than men. They are also 3 times less likely to get their businesses officially registered. However, working within the education services sector (governed by strict standards in terms of local and registration) or running large craft businesses would increase their likelihood to settle in independent local.

The increase of initial repayment capacity impedes the business development process, particularly for women. In fact, this can be explained by an underestimation of project development needs and of other competing needs (household, education, health).

Besides, increasing the number of employees raises by a factor of 10 the chance of both men and women to acquire a patency, and by a factor of 6 their likelihood to move to an independent local. For women, the increase of initial total current assets fosters their business development process. They are twice more likely to officially register their businesses or to move outside home.

Finally, each additional thousand dinars disbursed would double the likelihood of both men and women to settle within an independent premise or to get officially registered, and especially women. In addition, each additional year of adhesion increases 10 times the probability of women business to be officially registered. However, this does not imply that they will be setting up their projects within an independent premise, away from their homes. In fact, if a woman does not move her project to an outside-home independent premise at the beginning of the programme, she will be less and less likely to do it in the coming years, as it likelihood to settle within an independent premise drops by half for each additional year of adhesion.

## 5. Conclusions and Further Researches

The link between gender and microfinance and more specifically the impact of microfinance on women empowerment has already been studied many times, however there is still a debate concerning this issue, and our study claims to bring an innovative way of considering the question. Indeed, we consider economic empowerment through business development process, and characterize business development process through business location and formality. In other words, we consider that moving out of the household to work independently and more formally is a significant step towards economic empowerment.

In this paper, we focus on the differences of business growth between male and female microfinance clients, and the factors which could foster or impede this process according to gender. Our findings suggest that the entrepreneur profile differs between men and women, which means that, generally speaking, men and women do not start from the same point as microfinance clients. This is determinant in business development process. We report greater vulnerability of women, compared to men, which may explain the reason women tend to engage in income generating and seasonal activities, which remains a major obstacle to the formalization of their businesses. As a result, they have smaller size businesses in terms of net monthly profit, value of assets and number of employees than men.

Frequently, women underestimate project development needs and other competing needs, such as household, education and health expenditures. This could result in higher expenses for their household than expected, and

less money to reinvest in their businesses. This could also be explained by the fact that women are more likely to spend a greater proportion of their income on household well-being. However, at this stage, our study does not give precise information about the repartition of money between various financial needs.

In addition, women's businesses are not the main source of revenue for these households, and rather extra-revenues. Even though they have a new business to manage, they are most likely to still have to shoulder the same domestic responsibilities, which could even imply for them greater workload and perhaps domestic conflicts, as other above-mentioned studies have already shown. As a consequence, running income generating activities could even result in an increase of women's dependency towards men, instead of fostering their "empowerment", all the more so as most of them are running home-based activities. This combination of factors is likely to plunge women into isolation - and, even more important, increase their need for men. On the other hand, men usually benefit from larger social network and social support, and have more easily access to initial capital. As a result, women would have very little control on resources and very few opportunities to grow their micro-businesses, compared to men.

This could explain why running activities at home is a bigger obstacle to business development for women than for men. However, this remains an hypothesis based on the results of previous studies and should be verified in our case in Tunisia thanks to a qualitative study.

This situation remains unchanged even after receiving microcredit, and the gap between men and women activities have widen further. In fact, the access to a specific microcredit product depend on the activity's financial characteristics, project's development needs and repayment capacity, and, thus, women would receive lower amounts, and would, consequently, pay greater interest rates.

That said, our results show that, *ceteris paribus*, compared to men, microfinance support women's project developments. It increases their likelihood to settle within an independent premise or to get officially registered. However, if a women does not move to an outside-home independent premise at the beginning of the programme, they will be less likely to do it during next years.

In light of these results, it would be appropriate to: (1) set up state agencies specifically addressing women's needs to grow their businesses, in order to support and promote entrepreneurship and self-employment among women (choice of business activity, business acumen, planning, time management, soft skills, self-confidence), (2) facilitate women access to the market and to an initial capital (preferential rates, lower guarantees, priority access to certain business sectors), (3) initiate tax relieves, subsidies, investment allowances or other incentives to foster the development of women's micro-businesses, (4) establish an economic, social and political climate in favor of women's entrepreneurship with specific business regulations, (5) support the civil society and promote the dialogue on gender identities, roles and responsibilities issues, and (6) found, to the provisions of MFIs, a guarantee fund for women micro-entrepreneurs.

In future research, we propose to study the contribution of microfinance to the dynamic process of entrepreneurship, and, thus, need to consider a dynamic approach rather than a static approach. However, since we define the business development process through variables which are observed only at the time of a loan request; the stages of business development may only be known at the next loan application, and the exact times when the state changes are unobserved, we resolve to customise the recently developed multistate-disease-driven observation (multistate DDO; Lange et al., 2014) which has been used only in medical research so far, but which seems very appropriate for our subject. We aim to develop a multistate business development modelling framework that accommodates the complexities of observational data from micro-credit client records. Features of this type of data include panel observation of business trajectories, duration-dependent hazard functions, misclassified business observations, and random sampling times that may depend on the business development trajectory.

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