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A survey on funding MSMEs and female entrepreneurs
in MENA countries and the microfinance issue

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A Survey on Funding MSMEs and Female Entrepreneurs in MENA countries and Microfinance Issues

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Abstract:

The paper is devoted to the funding of Micro-, Small and Medium-size Enterprises from six non-oil exporting countries from Middle East and North Africa, with a focus on female entrepreneurs and the microfinance industry.

Funding theories display contrasted outcomes. On the demand-side, the capital structure of firms, size and collateral have a positive impact on leverage, in line with trade-off theory, whereas profitability and growth opportunities exert a negative effect, consistent with pecking-order theory. On the supply-side, credit rationing from banks harms female entrepreneurs.

Discrimination of female entrepreneurs proves non-existent according to the World Bank Enterprise Surveys, whereas self-selection takes place. However, this is inconsistent with the importance of females borrowing from microfinance institutions (henceforth MFIs).

There is mixed evidence that MFIs cope with the dual challenge of ensuring both financial self-sustainability and social performance (poverty alleviation). The same applies to Islamic microfinance. MFIs are no panacea in as much as they target poor people rather than the very poor, and funding small business has no visible macroeconomic impact.

Nevertheless, microfinance promotes inclusive growth, supports female entrepreneurship and job creation. Following the COVID recession, MFIs face a dilemma regarding defaulting clients, conducive to short-term liquidity and longer-term solvency issues.

Keywords: Entrepreneurship; Females; Funding; MENA; Microfinance; MSME.

JEL: G21; G32; O17.

1 Introduction

1.1. The (in)consistency of the MENA region.

One may wonder about the consistency of the Middle East and North Africa (MENA), in as much as there is no *MENA region* amongst the United Nations *Regional Groups*.

According to the World Bank website (January 2021), the MENA region gathers 21 countries/territories. Six Gulf Cooperation Council (GCC) members (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates -UAE), and 15 other countries or territories: five from North Africa (Algeria; Egypt; Libya; Morocco; Tunisia), nine from Middle East (Iran; Iraq; Israel; Jordan; Lebanon; Malta; Syria; West Bank and Gaza; Yemen) and one from Eastern

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Africa (Djibouti). Noteworthy is that Malta belongs to the European Union and that Djibouti is an outlier with respect to geographic settings.

As regards the World Bank income classification, eight countries enjoy high income: the six GCC members, Israel and Malta, whereas two low income countries (Syria and Yemen) have faced long-lasting wars. In addition, six upper-middle income countries include Algeria; Iran; Iraq; Jordan; Lebanon and Libya, whereas five lower-middle income countries comprise Djibouti; Egypt; Morocco; Tunisia and West Bank & Gaza (henceforth Palestine). Hereafter, we focus on a consistent sample of six non-oil exporting MENA countries providing updated information: Egypt, Jordan, Lebanon, Morocco, Palestine, and Tunisia.

1.2. Background and rationale

According to the Schumpeterian paradigm, economic growth is driven by entrepreneurship, depending on financial development and access to funding. GDP growth rates have been slowing down since the 2000s in the selected MENA countries, affecting differently high income (mostly oil-exporting) and other countries, wherein the extreme poverty rate increased between 2011 and 2015 (World Bank 2018).

According to Table 1, these MENA countries are undergoing rapid demographic transition, wherein half the population is under the age of 29, a major potential driver for economic growth. They have experienced high population growth and slow economic growth. Female education level has improved in most countries. However, it does not reflect in the female labour force participation rate, which remains the lowest in the world. There is a large discrepancy across countries (World Bank 2019). Adult female literacy rate is over 90 per cent in Jordan, Palestine and Lebanon, whereas it lags behind 66 per cent in Egypt and Morocco.

Table 1 Macroeconomic indicators of non-oil exporting MENA countries (percentage)

Countries	Egypt	Jordan	Lebanon	Morocco	Palestine	Tunisia
% Population growth (2008-2019)	1.95	3.66	3.07	1.21	2.23	0.97
% Female population (2019)	49.47	49.38	49.68	50.39	49.28	50.42
% Population aged 15-64 (2017)	61.03	61.3	66.66	65.79	63.85	57.64
Total adult literacy rate, % of people aged 15+ (2018)	71.16	98.22	95.06	73.75	97.21	79.03 ^a
Adult female literacy rate, % of females aged 15+ (2018)	65.5	97.83	93.30	64.59	95.74	72.8 ^b
% GNI per capita growth, PPP (2008-2019)	2.41	0.64	1.14	2.26	5.32	1.58

Note: ^a 2014, ^b 2015

Source: World Bank (2019)

According to Figure 1, the labour force participation rate of women is roughly over one third (below 37per cent) of that of men in the MENA region. Over 2008-2020, this ratio remains almost stable in Lebanon and Tunisia, whereas it declines in Egypt and Morocco after 2017, due to a drop in the female participation rate. Conversely, it improves in Palestine. Participation rate ranks higher in Tunisia, Lebanon, Morocco and Egypt.

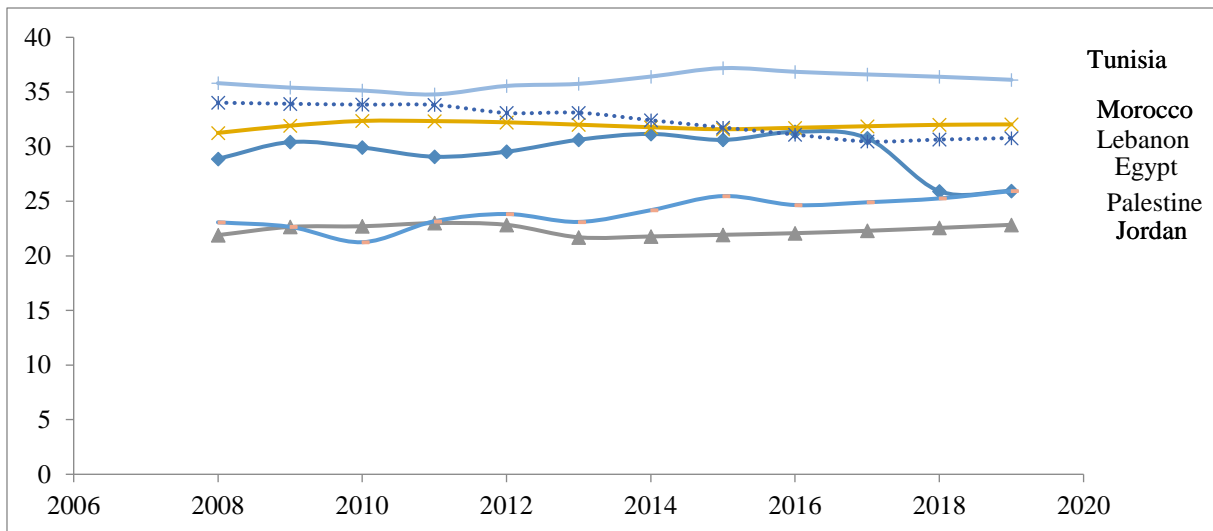


Figure 1 Ratio of female to male labour force participation rate (percentage)

Source: ILO (2019)

The MENA region has the lowest share of adults with an account at a formal financial institution (18 per cent) and it is even lower for female adults (13 per cent). The gender gap for access to finance is 18 per cent, the largest in the world (Demirguc-Kunt et al. 2018).

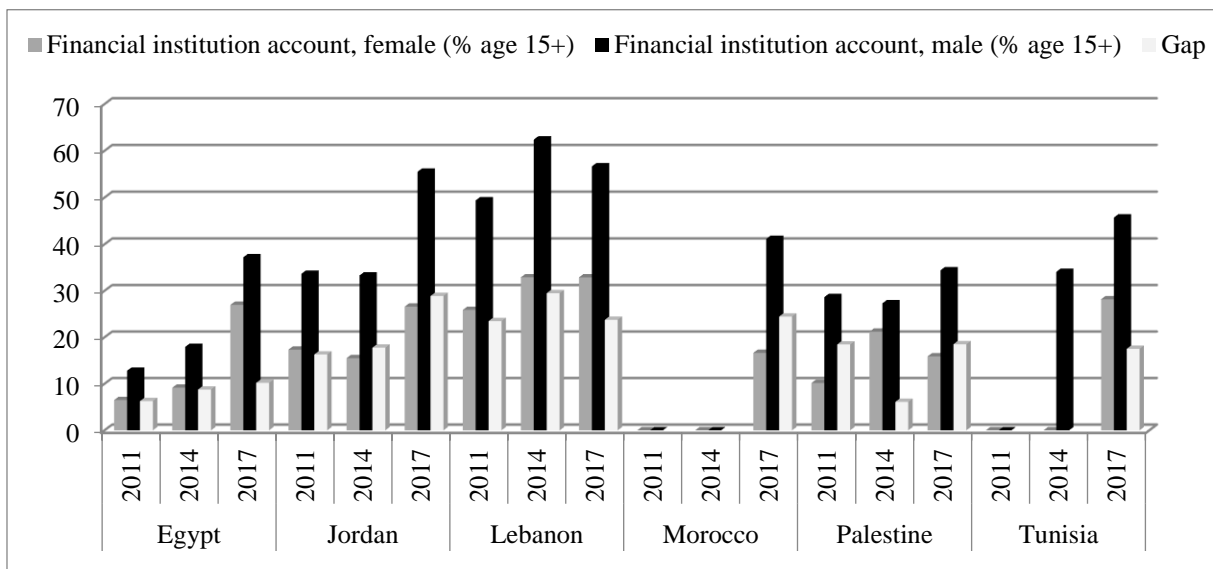


Figure 2 Gender inequality in financial inclusion

Source: Global Findex database (2017)

According to Figure 2, the gender gap is very high in Lebanon, Jordan and then Palestine. This gap increases over time in Egypt and especially for Jordan.

MENA displays the lowest rate of established entrepreneurs compared to other regions (6.8 per cent) and a high rate of business discontinuance. Although women are gaining momentum (ILO 2015), the pervasive stereotype remains that men are the breadwinners. Women face patriarchal socio-cultural norms and legislations that hamper their ability to start and develop their own businesses (Bastian et al 2018). Women in the MENA region were only half as likely to be

engaged in Total Entrepreneurial Activity in comparison with their male counterparts (GEM 2017).

Table 2 MENA gender inequality: ownership, management, registration and creditworthiness

	Egypt	Jordan	Lebanon	Morocco	Palestine	Tunisia
% of firms with female participation in ownership (2013)	16.1	15.7	43.5	31.3	10.7	49.5
% of firms with female participation in ownership (2019/2020)	5.2	22.6	9.9	16.1	6	40.1
% of firms with female top manager (2013)	7.1	2.4	4.4	4.3	1.3	8.5
% of firms with female top manager (2019/2020)	6.3	3.1	5.9	5.4	0.9	10.4
A woman can register a business in the same way as a man (1=yes; 0=no)	1	1	1	1	1	1
Percentage of firms whose recent loan application was rejected	17.6	29.6	7.2	5.7	6.8	14.2

Source: WBES (2013, 2019/2020)

In Table 2, the share of female-owned and managed businesses is weak in the MENA countries, due to several factors including registration procedures and access to credit. Tunisia ranks first in terms of business creation and management. The percentage of female owners drops in 2019 compared to 2013, it does not exceed 40per cent in Tunisia.

This lost opportunity hampers economic growth whereas women's equality appears to foster increased socioeconomic development and political stability (Klasen 2018).

The financial development in Egypt, Jordan, Morocco and Tunisia did increase in the past couple of decades, but has come to a standstill or even decreased in the years after the Arab spring, despite reforms in recent years based on various measures of financial depth, access and efficiency (Ayadi & de Groen 2018).

2 Funding theories from the demand-side and the supply-side

2.1 Funding from the demand-side and the capital structure of firms: TOT and POT

Trade-off theory (henceforth TOT) assumes that firms look for the optimal mix of debt and equity after accounting for market imperfections such as taxes, agency costs and bankruptcy. Firms will set a target debt level, trading-off between benefits and costs of debt (leverage), i.e. the tax shield benefit of debt *versus* financial distress that may be caused by too much debt (Kraus & Litzenberger 1973).

Pecking order theory (henceforth POT) assumes that due to information asymmetry between various parties, firms will first rely on internal sources of funds before considering external ones. Managers are assumed to choose the least expensive source of capital first then move to more costly options when the lower-cost sources are no longer an option. Hence, firms will set not an optimal capital structure but that they rather depend on internal finance, with respect to the following sequence: retained earnings, debt and equity. The greater the firm's profitability,

the greater their ability to accumulate retained earnings; thus, the lower their need to borrow. Conversely, firms will borrow more when they do not have sufficient internal funds (Myers & Majluf 1984).

Noteworthy is that other theories relate either to TOT or to POT. According to agency theory (Jensen & Meckling 1976), debt nurtures shareholder-debt holder conflict. Whenever debt is high, higher interest rates should compensate for the higher risk of liquidation. Hence, debt will have a negative impact on the performance of the firm. Agency theory fits in TOT, because the interest rate is a component of gross return and is included in the optimal funding strategy. Market timing theory (Baker & Wurgler 2002) rejects the idea of target leverage and fits in POT, arguing that managers will use the cheapest sources of funds, whether debt or equity. Transaction costs economics (Williamson 1988) find a close relationship between the determinants of financing choices and nature of the asset to be financed. In the case of a specific (intangible) asset, the sequence alleged by POT (Myers & Majluf 1984) is reversed as follows: cash flow, equity and debt.

Most papers address the capital structure of the MENA firms using samples of listed firms, which prove non-representative, especially with respect to SMEs. They include GCC and other countries (Belkhir et al 2016; El-Diftar 2020; Khaki & Akin, 2020; Touil & Mamoghl 2020) or focus on country-cases such as Jordan (Al-Najjar 2011), Morocco (Iatridis & Zaghmour 2013) and Egypt (El-Habashy 2018). Noura & Bellouma (2019) use a sample of listed and unlisted firms from MENA countries, whereas Achy (2009) studies unlisted Moroccan manufacturing firms.

Noteworthy is that female-owned or managed business, as well as SMEs as such, are little investigated. In this respect, Jadoua (2020) examines the Lebanese case, whereas Adair & Berguiga (2021a and 2001b) investigate Egypt, Morocco and Tunisia in 2013, as well as six MENA countries in 2019, including the aforementioned countries, Jordan, Lebanon and Palestine.

Table A1 (See Appendix) recapitulates the main finding of this extensive literature review, with respect to the effects of the determinants of capital structure upon leverage, according to TOT *versus* POT.

Most papers show that the size of firms and asset tangibility (collateral) have a positive impact on leverage, in line with trade-off theory. In contrast, profitability and growth opportunities exert a negative effect on leverage, consistent with pecking-order theory.

Hence, TOT and POT seem to both describe some determinants of demand for funding. In addition, POT seems to suit better small and very small MENA businesses (below 20 and 10 employees), which lack collateral (tangibles assets).

2.2. Funding from the supply-side and the major role of banks: credit rationing

On the supply-side, capital markets in the MENA region tend to be weak and use a bank-based system, wherein banks are the main funding providers (Iatridis and Zaghmour 2013) and credit rationing is pervasive.

Credit rationing theory (Stiglitz & Weiss 1981) assumes that borrowers are non-observable and that information asymmetries are pervasive. Credit rationing is an equilibrium wherein some borrowers get credit, whereas a priori identical other borrowers are denied credit, although they may be willing to pay a high interest rate. Banks do not raise the required interest rate in order to adjust supply and demand for loans. They prove risk averse, increasing the amount of required collateral or credit-rationing the SMEs. Actually, credit rationing also takes place when distinct groups of borrowers are observable by the lender. Hence, firms applying for risky projects can be discriminated. In as much as SMEs default more than larger firms, credit rationing is an increasing function of the probability of bankruptcy.

Models of disequilibrium (Maddala & Nelson 1974; Maddala 1983) address the existence of credit rationing and the potential constraints of access to bank credit for companies. They gauge the mobility of firms from the group of constrained to that of the unconstrained ones (switching) and *vice versa*.

Adair & Fhima (2014) apply a disequilibrium model to an unbalanced panel of 1,275 unlisted private SMEs over 2001-2006. With respect to credit demand, neither sales turnover nor internal funds is significant, ruling out both TOT and POT, whereas financing costs prove negative and trade credit stands as a (cheaper) substitute for bank credit, in line with POT. Turning to the more explanatory variables from the supply-side, the size of the firm and collateral required by banks exert a positive impact on the decision to grant credit, which is consistent with POT, whereas the manufacturing industry has a negative influence. Firms can switch between regimes of credit rationing (supply regime) and non-credit rationing (demand regime). The share of SMEs that may apply for credit and that are — partially or totally — rationed is large, increasing from almost 66 per cent (2002) up to 90 per cent (2006). This assessment is disputable, because actual loan applications are unknown and rejections are mixed with absence of applications.

3 Funding female entrepreneurs and the microfinance issues

3.1. Funding female entrepreneurs: self-selection and discrimination according to WBES

One major problem female entrepreneurs have to cope with is lack of financing from formal financial institutions. Beyond recent small-scale enterprise surveys (Berguiga & Adair 2021a) and the Global Entrepreneurship Monitor (GEM 2017), a household survey based on perceptions and attitudes towards entrepreneurship and not on firm data, the main data source is the World Bank Enterprises Surveys (henceforth WBES). This source was first used upon a pooled sample of three countries including 3,896 businesses from North Africa (Egypt, Morocco and Tunisia), among which less than one out of six (683) was a female owned or managed business (Berguiga & Adair, 2020; 2021a). The sample was extended to six MENA countries (Egypt, Jordan, Lebanon, Morocco, Palestine and Tunisia) in 2019 including 6,253 businesses, whereupon less than one out of seven (824) was owned or managed by women (Berguiga & Adair, 2021b).

Despite two main advantages of WBES, a consistent coverage and 26 questions addressing the finance issue, two main drawbacks are noteworthy. One is the lack of representativeness due to magnifying the number of medium and large businesses in the sample, although Ayadi & Sessa (2017) report that *Micro* enterprises account approximately for nine out of ten firms; and the focus upon both manufacturing businesses, although it is minor share in the distribution of industries firms in the sample. Another one is the underestimation of the informal sector, which is populated by *Micro*-enterprises (below 10 employees) that are not registered in order to escape taxes and/or social security contributions and contribute one third of GDP (Charmes 2019).

There are discrepancies between male and female entrepreneurship. Female-owned and female-managed businesses are mainly operating in shareholding and partnership companies. Business size differs by gender with respect to ownership and management. Females own slightly less micro and small businesses than males, whereas female managers run more micro and small businesses than males. Average age is higher for female owners, but younger for female managers. Over nine out of ten businesses are registered, and more for female owners *versus* male owners, whereas the share is almost the same for female and for male managers.

According to Table 3, one out of six female owners applied for credit, whereas more than one out of seven males do and enjoyed a slightly higher rate of acceptance, over four out of five applications proving successful. Hence, female owners are more creditworthy than male owners are. Conversely, loan applications from female managers prove less successful than those from their male counterparts, suggesting that female managers are discriminated.

Table 3 Loan application (demand) from businesses according to gender in 2019

Demand		Full sample				North Africa sub-sample				Middle East sub-sample						
		No loan application	Loan application*		Total	No loan application	Loan application		Total	No loan application	Loan application		Total			
		N (%)	Granted N (%)	Denied N (%)	Total	N (%)	Granted N (%)	Denied N (%)	Total	N (%)	Granted N (%)	Denied N (%)	Total			
Gender ownership	<i>Female</i>	626 (83,02)	98 (76,56)**	30 (23,43)	128	754	461 (81,88)	77 (75,49)	25 (24,5)	102	563	165 (86,84)	21 (80,76)	5 (19,23)	26	190
	<i>Male</i>	4,655 (91,41)	340 (77,8)	97 (22,19)	437	5,092	3,674 (92,96)	221 (79,49)	57 (20,5)	2783	952	981 (86,05)	119 (74,84)	40 (25,11)	159	1140
	Total	5,281	438	127	565 ^c	5,846	4135	298	82	380	4,515	1146	140	45	184	1330
Gender management	<i>Female</i>	283 (88,71)	28 (77,77)	8 (22,22)	36	319	237 (89,77)	20 (74,07)	7 (25,92)	27	264	46 (83,63)	8 (88,88)	1 (11,11)	9	55
	<i>Male</i>	5,023 (90,30)	420 (77,92)	119 (22,07)	539	5,562	3,920 (91,52)	288 (79,33)	75 (20,66)	363	4,283	1,103 (86,23)	132 (75)	44 (25)	176	1279
	Total	5306	448	127	575	5,881	4157	308	82	390	4,547	1,149	140	45	185	1334

Note: * Banks and Non-Banking Financial Institutions. ** Percentage of loan applications.

Source: Authors from WBES.

Slightly more male owners and managers than their female counterparts did not apply for a loan, because there was no need for a loan, or self-selection occurred due to various constraints, e.g. complex procedures, unfavourable interest rate, excessive requirement for collateral, fear of failure, etc.

In 2013, average loan interest rate is lower for female owners and managers than for their male counterparts. Once again, no discrimination seems to affect female entrepreneurs. In 2019, data on interest rate were not collected.

Logistic regressions address self-selection upon the subsample of businesses that did not apply for a loan and discrimination upon the subsample of businesses that did apply for a loan.

The *Size* of businesses exerts a positive and significant influence on self-selection of female managers unlike their male counterparts. Similarly, *Small* and *Medium* size businesses are more likely to be credit rationed than larger businesses are. WBES provide no statistical evidence of discrimination against female managers on the credit market in six countries from North Africa and Middle East (Berguiga & Adair 2021b).

Be as it may, such puzzling results are running against evidence of discrimination documented by from aforementioned enterprise surveys in the three North African countries (Berguiga & Adair 2021a) and several other sources (e.g., Saviano et al 2017) according to which Micro-, Small and Medium-size Enterprises (henceforth MSMEs) remain financially underserved and are also associated with a greater risk aversion and fear of failure. Last, the fact is that the microfinance industry grants credit to MSMEs and female entrepreneurs. Hence, biased WBES should be considered as an unreliable data source.

3.2. The microfinance issues: opposing approaches, interest rates and mission drift

To what extent does the microfinance industry fulfil inclusive growth and ensure both financial self-sustainability and poverty alleviation? Table 4 records descriptive statistics in this respect. In as much as women face discrimination in loan granting it is worth exploring ways that improve lending to MSMEs, promote financial inclusion while reducing poverty and taming gender inequality. In this respect, it is worth investigating alternative financing initiatives such as microfinance and Islamic institutions in North Africa, wherein 82 microfinance institutions (MFIs) operate up to 2019, a large number in Egypt and Morocco, just one in Tunisia and zero in Algeria. (MIX Market 2019).

MFIs are facing a dual challenge: they must ensure the inclusion of poor people, while being financially sustainable without depending on subsidies. Conventional microfinance encapsulates two opposite approaches. *Welfarists* emphasise social performance without

rejecting long-term financial performance. They target the poorest households, whose incomes are below the poverty line (\$1.25 per day); loans are often dedicated to women because their control on income and household savings result in their empowerment and the improvement of their livelihood as well as that of their children. This school is supported by NGOs or co-operatives. Although it does not exclude that MFIs may be profitable, it advocates a large reliance on subsidies, even on the long run in as much as granting small loan amount to poor people proves expensive. *Institutionalists* (Consultative Group to Assist the Poor -CGAP at the World Bank) is currently predominant, advocating short-term financial performance to achieve long-term social performance. This school represents some NGOs, NBFIs and micro credit unions, upscaling village banks as well as some downscaling commercial banks. It may be suspected to prompt a drift in the MFIs' social mission.

MFIs aiming at financial sustainability require high interest rates from or/and grant to less risky and less poor customers, especially if they have to do without subsidies. Although *Welfarists* target the borrower and *Institutionalists* focus on the lender (MFI), both approaches share the same concern for poverty alleviation, trying to achieve short-term trade-off and long-term complementarity between social and financial performances.

Adair & Berguiga (2014) analyse the social performance (henceforth SP) and financial performance (henceforth FP) nexus over 1998-2011 upon a sample of 64 MFIs in nine MENA countries, using simultaneous equations models to examine both one-way and reciprocal dependency between SP and FP. Three stage least squares with fixed effects provides short-term estimators, whereas error component three stage least squares controls for random characteristics of MFIs.

As for 2008, spectrum is contrasted: MFIs in Egypt are both socially and financially successful, whereas those in Yemen are socially successful and those in Jordan are financially successful. The question arises whether social performance targeting the poor (SP) oppose financial performance achieving profitability (FP) or rather supplement it? Is there reciprocal relationship between SP and FP, and how do they combine? Or Is SP determined by FP through one-way dependency and *vice-versa*?

Three variables take care of SP. First, depth of outreach (Henceforth Depth), measured as $ALGNI - Poverty\ Line$. $ALGNI$ is Average Loan (AL) per borrower divided by the Gross National Income (GNI) per capita and annum. Poverty Line PL1 (\$1.25/a day per capita or \$ 456.25 per annum) includes the very poor. Poverty Line PL2 (\$2/a day per capita or \$ 732 per annum) include the poor. If $ALGNI - PL1 < 0$, the MFI is targeting the very poor. If $PL1 < ALGNI < PL2$, the MFI is targeting the poor. If $ALGNI - PL2 > 0$, the MFI is targeting the non-

poor. Second, the Number of Active Borrowers (NAB) is a proxy for the breadth of outreach, although it may prove misleading, because borrowers are not necessarily poor. Last, the percentage of female borrowers (FB) is also the first indicator of SP.

FP is gauged with both the adjusted return on assets ratio (AROA) and financial self-sufficiency (FSS) that are positively and significantly correlated. They are the best indicators of the sustainability and profitability, assessing the capacity of MFIs to grow without resorting to subsidies. The portfolio at risk of 30 days (PAR) is the first determinant in as much as a loan that bears high risk will drive a negative impact on financial outcomes. Hence, the MFI will target a less risky clientele and mission drift favouring less poor customers may occur.

Between 2004 and 2010, the relationship between Depth and AROA and FSS reflects a trade-off between SP and FP: AROA and Depth displaying a cyclical and opposite pattern. FSS and AROA declined, FP dropped in 2011 and MFIs moved towards non-poor borrowers, due to unfavourable political environment in the countries encapsulating most MFIs of the sample (Tunisia, Yemen, Egypt, Syria, Iraq and Palestine).

Both performances are negatively affected by the lack of specific microfinance regulation, or the absence of prudential regulations (Tunisia and Morocco), conducive to impaired loan portfolio. Better FP impairs SP but the reverse relationship remains unclear. There is a trade-off between social performance and financial performance on the short run, which might be persistent on the long run.

In terms of targeting poor clients, do high interest rates run against funding the poor?

Adair & Berguiga (2015) address the high interest rates of MFIs, which seem to drive a mission drift opposing their social mission, i.e. poverty alleviation, thus raising a moral issue. They investigate factors that determine the level of interest rates with regard to the financial performance of an unbalanced panel of 66 MFIs in nine MENA countries over 2004-2011. Internal factors (cost of capital, operating expenses and loss provisions) distinct from the external ones (regulation, competition and inflation) the latter explain better than the former the borrowing rate (5per cent on average) but do not explain the lending rate (30per cent on average). A cluster analysis upon the interest rate and social performance nexus of 53 MFIs in 2008 is designed. It call into the question the irrelevant classification of MFIs based upon the only financial margin criterion, i.e. the gap between lending and borrowing interest rates, contending that low margin MFIs are pro-poor, whereas high margin MFIs are loan sharks. These two categories do not confuse with profitable and non-socially performing MFIs that target the non-poor and few women *versus* unprofitable and socially performing MFIs.

Berguiga & Adair (2019) estimate the determinants of the lending rate using an instrumental variables model on a sample of 66 MENA MFIs over 2004-2014. They test five hypotheses drawn from the microfinance literature: They confirm the role of external factors (competition and regulation), whereas internal factors (operating expenses and age) are unverified and social performance exerts a contrasting impact on the interest rate, whereupon financial performance is often the main determinant. In this respect, the MENA region seems rather atypical within worldwide microfinance industry.

3.3. The impact of microfinance upon business development and poverty alleviation

According to Duflo et al (2014) the impact of access to credit for clients of the Moroccan Al Amana MFI has resulted in increased working days outside the household, improved savings and consumption.

Öztürk & Radouai (2020) contend there is mixed evidence regarding the extent to which microcredit reduces poverty. On the one hand, there are correlations between the development in the financial sector and economic growth, the former affects the latter and leads to poverty alleviation, as providing the poor with a microloan increases his/ her income and develop assets. On the other hand, there is no clear evidence that the MFIs have a positive impact on the wellbeing of poor people in Yemen. Similarly, they challenge the positive impact of microfinance services on the performance of micro enterprises, arguing that these services play no role in developing businesses in Morocco, using the 2013 WBES that proves an inappropriate data source.

Bauwin (2019) points out a puzzling finding: Loan amounts granted to women grow more slowly from one credit cycle to another than those granted to men, although female clients are less risky with respect to payback.

Microfinance enables poor women to involve in income-generating activities, which helps them become financially independent, strengthening their decision-making power within the household and society. Hence, microfinance has the potential to reduce gender inequality.

Zhang & Posso (2017) provide evidence from macroeconomic cross-country panel data for 64 developing economies over 2003–2014 that both supports and contradicts this hypothesis. Female participation in microfinance is associated with a reduction in gender inequality

At worldwide scale, access to microfinance proves very uneven across regions. As regards the MENA region at the end of 2017 (MIX 2017), the percentage of loans granted to MSMEs is the highest (85 per cent on average) and the percentage of women borrowing from MFIs is one of the lowest (60 per cent on average).

Table 4 displays also a disparate picture between the MENA countries. In Egypt, main microfinance providers are large NGOs or local banks serving very poor and rural borrowers. In contrast, MFIs in Palestine are focusing on a less poor clientele, whereas MFIs in Jordan target women who are members of solidarity groups.

Table 4 Characteristics of MENA MFIs in 2017

Country	MFIs	NAB (1,000)	Average loan balance / GNI per capita	Rural borrowers N (%)	Female borrowers (%)	Solidarity groups N (% of loans)	Number of loans outstanding			Lending rate (%)	Portfolio At Risk >30 days (%)	Risk cove- rage (%)
							MSMEs N (%)	Micro N (%)	SMEs N			
Egypt	5	911.7	0.0469	515,5 (56.54%)	67%	399,571	907,276	813,843	93,433	34.6%	0.6%	408.1%
Jordan	4	246.6	0.1403	106,3 (43.10%)	88%	151,347 (61.37%)	201,306 (81.63%)	200,544	762	32.5%	1.6%	210.6%
Lebanon	1	72.8	0.1003	32,0 (43.95%)	57%	15,594 (21.42%)	72,802 (100%)	72,468	334	30.3%	6.7%	398.8%
Morocco	5	519.1	0.1817	227,0 (43.72%)	46%	98,831 (19.03%)	386,288 (74.41%)	386,288	0	26.2%	6.1%	61.9%
Palestine	4	73.3	0.9228	34,7 (47.33%)	33%	0	31,084 (42.40%)	29,756	1,328	14.3%	5.1%	78.0%
Tunisia	1	329,5	0.1414	128 (38.88%)	61%	0	266,646 (80.92%)	266,646	0	26.2%	0.8%	176.3%
Total	20	2,153		1,043.5 (48.46%)	1,263.093 (58.66%)	665.339	1,865.402 (86.64%)	1,769.545 (82.189%)	95,857			

Source: MIX (2017), WGI (2017)

Among active borrowers in the region, over eight out of ten are MSMEs, in particular in Egypt and Lebanon. In the first place, MFIs grant micro-credit to *Micro*-enterprises, informal for some of them, a share above nine out of ten. Average lending rate is high in Palestine, Egypt and Jordan, within a range of 44-32 per cent, although borrowers payback. Average loan balance per borrower is small, thus businesses could afford funding only working capital rather than fixed assets, suggesting that they are rather subsistence activities.

3.4. Conventional versus Islamic microfinance industry: facing the same dual challenge

Islamic microfinance faces the same dual challenge – social performance vs. financial performance - as in the conventional microfinance industry.

Berguiga et al (2020) investigate over 2004-2015 the financial and social performance nexus upon an unbalanced panel of 67 MFIs from 10 MENA countries, including 18 Islamic MFIs (IMFIs). *Solebusiness* IMFIs granting exclusively Islamic services are distinct from *Window* IMFIs that diversify their services (Islamic and conventional). Two models with interacting variables test seven hypotheses with respect to the performances of IMFIs *versus* conventional MFIs (CMFIs).

IMFIs offer *Sharia*-compliant financial services without interest, which is prohibited: *Qard Hassan* (interest-free credit) accounts for one out of four contracts, *Murabahah* (trading) and

Ijara (leasing) account for two out of three contracts, whereas *Mudharabah* and *Mucharakah* (partnership contracts and profit and loss sharing) account only for one out of sixteen contracts and is not devoted to the poor. Price differentials (fees) in trading contracts (*Murabahah*) bear an implicit interest rate that compares easily with interest rates charged by CMFIs. Ahmad et al (2020), comparing CMFIs and IMFIs claim that the latter may be likely to underperform financially relative to the former, due to higher operational and administrative costs for *Murabahah* contracts, including the absence of pricing for subsidised grants such as *Qard Hassan*.

There is a difference with respect to poor clientele: CMFIs target women because they are poorer than men on average, whereas IMFIs target poor families. One would assume that IMFIs may enjoy a higher social performance, because they benefit from Islamic charitable donations (*Zakah*, *Sadaqah* and *Waqf*), an equivalent of subsidies for CMFIs. In turn, a reduced cost of resources should drive a positive impact on financial performance.

Whether Islamic or conventional, MFIs face a financial *versus* social performance trade-off, at least on the short-run, H_7 being the only verified hypothesis. *Window* IMFIs experience higher financial performance than *Solebusiness* IMFIs and CMFIs. However, all other hypotheses regarding financial performance are unverified. Outreach of the *Solebusiness* IMFIs differs from that of *Window* IMFIs and CMFIs. Nevertheless, all hypotheses concerning social performance prove also unverified. Hence, there is no evidence that IMFIs perform better than CMFIs.

4 Policy issues and recommendations

The microfinance industry is no panacea for poverty alleviation in as much as MFIs target poor people (above the \$1.90 a day) rather than the very poor (below \$1.90 a day), who deserve support, but do not necessarily need small business funding. Microfinance funding small business is not a stake in terms of macroeconomic impact, but it is definitely one at mesoeconomic level (local or possibly regional). It is also instrumental for promoting gender equality and female entrepreneurship.

Özşuca (2019) applies the Fairlie decomposition method to the 2017 Global Findex database, covering 14 MENA countries. Financial inclusion gender gap is widest (25 per cent) for account ownership, while it is smallest (5 per cent) for the formal credit. The fact that women are less likely to be employed explains a large extent why they are less likely to have an account. Several variables jointly explain between the 41 and 60 per cent of the gender differential in financial inclusion gap, among which the largest contributor is employment.

The MENA region must fight against youth unemployment, targeting especially women across with incentives to entrepreneurship and job creation.

Gender parity in the formal financial system should improve through innovative products and processes in addition to further policy action fostering equality purposes with respect to education and jobs. Closing the gender gap in accessing finance should also extend to informality, in as much as many micro and small enterprises owned or managed by women are informal entities without registration or/and social protection. One way to increase female demand for financial services is to introduce financial products meeting their needs (e.g. social protection basic coverage).

Egypt, Jordan, Morocco, Palestine, and Tunisia have taken policy initiatives to strengthen microfinance. Morocco updated its Microfinance Associations Law to consolidate smaller microfinance institutions to curb risky loans and financial vulnerabilities. Technology is opening new avenues to strengthen financial systems and inclusion. Fintech, including mobile banking, e-banking, e-wallets, advanced database technologies, biometrics, and distributed ledger technologies, has become a relatively inexpensive tool that can help excluded participants use banking services and enter the financial market. This is particularly true for people who live in areas with low bank branch and ATM penetration who could be users of mobile or online banking. Fintech can also lower transaction costs of banks and governments by making credit histories and information on customers readily available (Purfield et al 2018). The microfinance industry provides a more inclusive financial system for female-owned/managed businesses, overcoming the need for collateral, the lack of credit history and the complexity of the application process. Governments, NGOs, as well as the financial sector itself, should play their part in securing the sustainability of the microfinance industry. In addition, policies can support emerging MFIs until they can prove self-reliant and tame the risk borne by MFIs by covering a guarantee, which in turn could allow MFIs to lend to borrowers deemed risky.

Conclusion: the aftermath of world pandemics?

MFIs are facing several challenges. (i) Maintaining the quality of their loan portfolio drives to a dilemma: rescheduling outstanding loans will drive to short-term liquidity and longer-term solvency issues. Not rescheduling will drive social tensions and losing control of the portfolio if too many clients have lost their source of income. (ii) Secure a source of revenue to meet their operational costs and financial charges (towards third-party funds) or find a way to recapitalize. Conversely, to what extent should States ensure the liquidity of MFIs? The dilemma opposes applying prudential standards in a flexible way *versus* avoiding the creation

of credit lines that could generate additional risks (e.g. via an over-indebtedness of certain clients).

Macroeconomic prospects for MENA look dull. Non-performing loans stand below 5 per cent in both oil exporters and poor countries. Morocco and Tunisia wherein the microfinance proved quite successful are standing beyond that threshold. A serious drop in GDP growth in 2020, not only although especially for oil exporters, will impair available resources that should be devoted to funding inclusive growth policies and subsidies for MFIs (IMF, 2021).

The loan portfolio sharply deteriorated over 2020, due to the situation of customers and refunds, but the microfinance industry has been resilient, thanks to large moratorium. No liquidity crisis occurred so far. However, future solvency remains a concern.

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Appendix

Table A1 Determinants of capital structure upon leverage according to TOT *versus* POT

	Size +	Profitability –	Asset Tangibility +	Growth +
Belkhir et al (2016) (444 listed firms, 2003–2011)	positive	negative	<i>negative</i>	negative
El-Diftar (2020) (416 listed firms, 2007-2016)	positive	negative	<i>negative</i>	N/A
Khaki & Akin (2020) (329 listed firms, 2009-2017)	positive	negative	positive	positive
Touil & Mamoghl (2020) (506 listed firms; 2006-2014)	positive	negative	positive	positive
Al-Najjar (2011) (86 Jordanian firms, 1999-2003)	positive	negative	positive	N/A
Iatridis & Zaghmour (2013) (83 Moroccan listed companies, 2002-2011)	positive	negative	<i>negative</i>	<i>negative</i>
Nouira & Bellouma (2019) (216 listed and unlisted firms, 2006- 2015)	<i>negative</i>	negative	positive	not significant
Achy (2009) (550 non-listed manufacturing firms in Morocco, 1998–2003)	positive	negative	<i>negative</i>	positive
El-Habashy (2018) (240 firm-year observations for Egypt, 2009-2014)	positive	negative	positive	positive
Jadoua (2020) (102 Lebanese SMEs, 2014-2017)	positive	negative	N/A	N/A

Source: Authors' compilation