

E-Technological Influence on SMEs Development in Arab Countries

Dahi Emine

School of Management, Shanghai University

Building W-312 Shangda Road No. 99 BaoShan City, Shanghai, P.R. China

Tel: +86-13757951745; E-mail: dahemin@hotmail.com

Abstract: This paper aims at explaining the fundamental principles of Etechnologies and their impact on business in Arabic countries. Economic system is directly linked with the performance of the company, and company functions need to be adjusted according to the market structure and economic environment. The small and medium enterprises in the Arabic countries have suffered tough conditions in the recent past due to the lack of technology usage. This paper presents an analysis of how strong economic system supported by technological uasage influence the operations of industries being a small-medium enterprise. The study involves the gathering of primary information from CEOs of 525 firms of the Arab. The results of the survey clearly indicates the difference between the revenues generated by less technology using firms and greater technology using firms of small and medium enterprises. With this paper, we shall be able to identify the key factors that are responsible for effective revenue generation that results from the usage of greater technology.

JEL Classifications: D22; F24; M17; O31

Keywords: SMEs; E-Technologies; Job creation; Arab region

1. Introduction

Small and medium sized enterprises, or SMEs, are widely recognized as being the major contributors to economic growth, job creation and economic activity in most developed nation countries. As such, encouraging the growth and success of SMEs is vital to the success of the Middle Eastern countries and their industries.

1.1 Problem Introduction

However, in the aftermath of the various conflicts, which swept the world in the wake of the world recession and war on terror crisis, many SMEs have faced a highly challenging business environment. In particular, large amounts of the state aid that was previously used to support SMEs has been diverted to keeping banks and larger businesses afloat in the difficult environment; the reductions in the flow of credit have severely impaired supply of finance to SMEs; and several important economic development projects have been put on hold or cancelled due to a lack of finance. SMEs considerably add to business, financial, technical and local growth in all financial systems, whether they are developed or developing.

1.2 Importance of the Issue

Although, the definitions of Small and Medium scale Enterprises may contrast. It is believed that over 1.4 million SMEs operate in the Middle East, out of which around 30% are related to production. Small and Medium scale Enterprise segment consists of about 40% of total business manufacturing, 35-40% of total overseas sales and a major contribution to employment (about 2.5 million) and makes around 8% of GDP . Nonetheless, Small and Medium scale Enterprises are going through a change which includes reformation of plans and services since the new guidelines were declared in 1991. The principal risks that threaten the professional sector the political instability experienced by the countries located in the Middle East means that the elements of confidence will weaken the investment climate in the short term. If countries such as Egypt have pledged to abide by international agreements and trade, the departure of Mubarak's sense of "unknown territory", which is currently prevailing in the country will certainly have implications for investors who are looking for professional opportunities. The ability of countries in the Middle East to be bound by other contracts and agreements will depend on the way out of the current crises.

1.3 Purpose of This Paper

This paper aims at explaining the fundamental principles of Etechnologies and their impact on business in Arabic countries. Economic system is directly linked with the performance of the company, and company functions need to be adjusted according to the market structure and economic environment.

On the other hand Egypt has a relatively formal administrative structure (albeit corrupt), countries such as Libya face the impact of the powerful tribes. The resort of many of these tribes is to take advantage of the chaos in enhancing its influence and interests effects of global recession. The effects of global recession on the real economy are strongly felt in many countries of the Middle East region. In fact, early signs indicate, in many countries, a reduction in growth rate during the last quarter of 2008. In all countries of the Middle East region, except Qatar and Yemen, the growth forecasts for 2009 are below the 2008 rate. Qatar and Yemen are the exception with a 2009 GDP increased because of greater production capacity of liquefied natural gas (LNG). According to estimates, the Middle East region is expected throughout a substantial decline with growth of 3.3% in 2009 against 5.5% in 2008.

1.4 Paper Contribution

The result of the study shows that in future, if the Arab countries need to fulfill the demands for today, they must have to meet the technological ways and have to spend much on technology in order to get succeed. It is hoped that the future of SMEs will be bright in Arab region provided they take care of the technological factors because the study has proven that the other factors are less affected by it.

The findings indicate that there are significant positive relationships between Government financial supports and private banks loan to SMEs from one side and between the growth performances of SMEs, of which financial partnership is the most significant. Despite the progress so far, it is being widely recognized that government sector and private banks need to capitalize on mutual strengths to accelerate the process of SMEs development and increase productivity so that the promised benefits reach all the stakeholders.

2. Literature Review

Research which examines new ventures, “born-global” firms, small and medium sized enterprises (SMEs), and multinationals enterprises (MNEs) has provided an array of findings regarding the drivers of internationalization and the factors that contribute to the success and performance of firms in international markets. Management literature has examined top management team (TMT) characteristics; and entrepreneurship literature has examined the innovativeness, risk-taking, and competitive aggressiveness of individuals and organizations as the first to act upon opportunities given different conditions of business risk.

Concurrently, innovation research, encompassing new product development (NPD) and to a lesser degree, new service development (NSD), has shed light on the adaptation of a company’s products/services to increase market share and establish business advantages. With regard to the effects of firm internationalization on performance, empirical results are mixed. Researchers have a limited understanding of the performance benefits of intangible resources, such as human resources in professional services firms. Proponents of the resource-based view (RBV) posit that best intangible resources provide sustainable competitive advantages and superior 2 performances.

However, the process by which advantages are created in global professional services involves an understanding of firm resources and differences in service needs across borders. Many questions remained unanswered. This dissertation addresses this need by proposing an integrative framework that incorporates advancements gained from multiple research streams. This research then tests a model of professional service internationalization and performance among a sample of SMEs in India, an emerging market contributor to international services trade. The importance of SMEs in a global economy the incorporation of global economic changes has changed the competitive paradigm of businesses and requires new global expansion plans in order to achieve long-term growth and stability.

The small-business sector has become more important as they emerge as a dominant force impacting the growth of national economies. A noteworthy point is that economic history has demonstrated that no single, clear-cut path to Industrialization exists with regard to the methods, types of industries, or even the institutions involved in the process. Geographers and other researchers have been interested in the conditions and forces that most often make each Industrialization process unique with regard to its pace, methods, institutional involvement, and end results. The paths to Industrialization in the United States and Britain were considered to have been largely led by the private sector, but even these economic transitions often involved degrees of policy-led participation.

One simplistic view of world trade would be to expect that whatever country is “better” at producing a good in some absolute sense will end up specializing in the production of that good. If this were the case, it would spell bad news for poor developing countries considering opening up their borders to free trade. Because industrialized countries such as the United States have high levels of productivity across all sectors, a less technologically advanced developing country in the Middle East would have no hope of competing in a free-trade environment if absolute productivity levels were all that mattered. With so many people living slightly above the poverty line, the slightest shock could, therefore represents a risk cornered more people to poverty in many countries of the Middle East region.

The impossible peace in the Middle East The tensions on the northern border of Israel and Lebanon have escalated and as political analysts discuss how long and what will end this conflict in the Middle East, several concerns economic matters are already being felt among investors. Fears

that the conflict could spread to the region and engage countries like Syria and Iran have caused oil prices were mounted on a roller coaster in international markets. Although neither Israel nor Lebanon and Syria produce oil in large quantities, the three are considered key countries in the Middle East, a region that generates 30% of global oil and 75% of hydrocarbon reserves. Iran, meanwhile, is the second member of the Organization of Petroleum Exporting Countries and political and ideological ally of Hezbollah.

These fears led to the price of a barrel of oil exceeded the barrier of U.S. \$ 78 in London and New York, and then give a little and stay unstable following the course of events. An effect that, no matter how many kilometers away is the Middle East, will feel a little more or a little less in the pockets of everyone. So far, Lebanon had been cutting the weight of its massive foreign debt, equivalent to 180% of GDP, thanks to the increasing flow of foreign investment and strong economic growth. But everything suggests that, after the Israeli offensive, the bonanza will be in the past. With the conflict, Israel must also forget the 5.2% growth forecast this year. Just at a time when the country was recovering from the economic crisis of 2001-2002 and when employment growth had begun to stimulate domestic consumption. More than U.S. \$ 2,000 million estimated to cost the government military offensive, as well as the impact on tourism and consumption, achieved at least delete 2% economic growth expected. This is compounded by the damage that may occur to high-tech industry, computers, software, etc.- in Israel, a sector that has experienced a boom in recent years and could be affected by the conflict.

The impact on the world economy will certainly depend on the duration of the conflict and the "chips" or "actors" who participate in it. If the conflict is resolved in the short term, without involving the countries of the region like Syria and Iran, then the impact will be limited to a temporary imbalance in oil prices in international markets such as that seen in recent days. But, on the contrary, if the conflict involves countries like Syria and Iran, that will create more instability in oil-producing countries. Then, the impact will be further enhanced, so one can expect oil prices above \$ 90, with negative consequences on the economies that generate most of all, of the importing countries worldwide. For now, investors are cautious and seeking a safe haven in the dollar, Treasury bonds and gold United States, while closely follow each of the steps that occur in the Middle East.

3. Analyzing the Significance of Questionnaire

The most important part of the analysis on which the whole study depends is the importance, significance and reliability of the questions. The questions in the questionnaire need to be tested in order to test their significance and one-sample t-test was applied. This section 2 of the questionnaire contains information about the electronic technology and SMEs development in the Arab countries. The answers were mostly in the favor of the questions in this section and therefore the t-results also show that the questions were significant as their calculated values are far greater than the tabulated values and their level of significance is also very high i.e. less than 0.05. The results now showing that the answers of the questions given by the CEOs of almost lie within one range and logically too their significance can be analyzed as no CEO will deny the importance electronic technology and SMEs contribution in the Arab countries.

The section 3 of the questionnaire contains ten questions about the Financing Innovation plans & SMEs Development in the Arab countries. The significance t-test is again applied to check the significance and the questions are found to be highly significant and similarly section 4 and section 5 was also treated in the same way in order to analyze the significance and results were found to be

significant. In short, the questionnaire designed for the survey for gathering information about the SMEs was significant because all the answers given by the CEOs were according to particular criteria. The tables are presented in the appendix below for the section 3, 4 and 5. The questions related Challenges in SMEs Development, Barriers & SMEs Development and Other Features and SMEs Development.

In this section we have seen how to test the null hypothesis of the questions from two means from one sample. We will actually judge whether the test results are significant-Based on the result of the comparison between these two samples. The technique used is called t-test for one sample (one sample t test). This technique is used to compare relative groups, created by a categorical variable, based on their average measurement (continuous variable).

One-Sample Test

	Test Value = 0					
	<i>t</i>	Degree of freedom	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Q1	112.213	524	.000	4.029	3.96	4.10
Q2	82.037	524	.000	2.979	2.91	3.05
Q3	109.861	524	.000	3.990	3.92	4.06
Q4	74.031	524	.000	3.533	3.44	3.63
Q5	110.574	524	.000	4.000	3.93	4.07
Q6	85.556	524	.000	3.008	2.94	3.08
Q7	57.081	524	.000	2.010	1.94	2.08
Q8	52.511	524	.000	2.549	2.45	2.64
Q9	85.327	524	.000	3.029	2.96	3.10

4. The Empirical Model and Core Variables

The most important part any statistical study is the empirical model formulation and then converts into meaningful results. While preparing the empirical model variables that we use should be significant and reliable otherwise the results of the model will certainly be insignificant. The researcher in any study uses those variables which are closely linked to the analysis and that the researcher can gather meaningful data for it. The variables that we are going to use will be the Technological expenditures on SMEs, employees of the SMEs, the age of the firm and the revenues collected for SMEs.

The importance, significance and reliability of the variables must be understood to analyze their importance and therefore a small discussion would be created on the importance of choosing these variables.

4.1 Technological Expenditures on SMEs

The variable is considered as the core variable because it is the variable on which the whole studies depend. The technological expenditures are that expenditure which the SMEs do on their

business to advance and improve. The more an SME spend on its technological expenditures, the more profit is assumed to be gathered because there is no doubt that the advancement in the technology increases the productivity of the firms and certainly they have a positive relationship with each other.

4.2 Employees within SMEs

This is another important variable that needs to be place in the model for analysis and the reason is that the more employees a firm contains, it is expected due to economical laws that the profit maximization problem will be solved much more quickly. The variable also related directly to the revenues. There is no doubt that in these times of technology more number of employees hired by the firm does not guarantee its profit but the use of technology will certainly put the labor or employees on the back hand and reduces the amount of time for the SMEs. So, the relationship is quite ambiguous therefore we assume that relationship to be positively related.

4.3 Age of the Firm

The technological expenditures certainly depend on the age of the firm. The old the firm is, the more it analyzes the importance of technology and will certainly pay more towards it. The relationship is assumed to be positively related as the increase in the age of the firm increases the amount of technological expenditures on it.

4.4 Revenues of the Firm

The firm, no matter how old it is, no matter how much employees it contains, the revenues are most important variable if any firm want to invest in technological expenditures. The more revenue a firm earns, the more it invests in the technological factor. There is again a positive relation that increases technological expenditure with the increase in revenues of the firms.

4.5 The Regression Model

$$Y (\text{Technological expenditure}) = \beta_0 + \beta_1 (\text{Revenues}) + \beta_2 (\text{No. of employees}) + \beta_3 (\text{Age of the firm})$$

5. Analysis of the Regression Model

5.1 Descriptive Statistics

Variable	Mean	Std. Deviation	N
T_EXPENDITURES	18.41	5.744	525
EMPLOYEES	299.98	118.239	525
FIRM_AGE	13.59	6.711	525
REVENUES	135.49	24.436	525

The descriptive statistics is important statistical tool for measuring and analyzing the data. The variables that are taken for regression need their descriptive need to be found out to get the general idea about the behavior of the data. The mean of technological expenditures in the SMEs is found to \$18.41 (in thousands) i.e. every SME in Arab countries is spending \$18.41

(thousands) for technological innovations. Similarly, almost 300 employees are working in every SME in Arab with almost 14 years of experience in the SME market. The mean amount of revenues, the Arab SMEs earn annually is about \$135.5 (thousands). The SD are showing that the data was a little varied and but still gives meaningful results.

5.2 t-Test for Significance

The variables which are taken for regression need to be checked whether they are significant or not. For this purpose, t-test is applied to analyze the significance and the results proved the significance to be very high. All the t-values are large and all the significance values are within 0.05 which shows high significance of the variable. There are no more core variables required for the analysis as these variables gives high significance. If the variable shows some insignificance then the inclusion of new variables would be a better idea but when all the variables are significant so, increasing more variables will makes the empirical model more complicated.

Variables	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Employees	60.705	524	.000	311.124	301.06	321.19
Age	40.651	524	.000	12.785	12.17	13.40
Revenue	127.711	524	.000	136.825	134.72	138.93
Total expenditure	73.898	524	.000	18.328	17.84	18.81

5.3 Regression Analysis

The regression analysis is applied on the model after it was found significant. The model summary also proved the significance through F-statistic which is found to be extremely significant and the significance level is also acceptable which is under 0.05. The most important thing that is resulted in the model summary is that the relation between the technological expenditures and the other independent expenditures is found to very much strong because R showing 0.78 which means that these variables 78% data of each other. The adjusted R2 is found to be 0.608 i.e. if any variable needs to be removed than after removing the most important variable the relation gets down to almost 18%, which shows that no variable should be removed in order to get the significant results. Moreover, the Durban Watson value shows that the variables contain no multi-collinearity i.e. there is no relationship between the variables within themselves and therefore would not affect the BLUE (Best Linear Unbiased Estimator) property of the model. The ANOVA table also shows that there is a very less residual part in the variation i.e. the whole model contains a little amount of residual that needs to be fitted. But changing the variable would not be a better advice as discussed above that increasing the variables leads to the complexity of the model so, this residual will be kept as it is.

5.4 Model Summary

a. Predictors: (Constant), REVENUES, EMPLOYEES, FIRM_AGE;

b. Dependent Variable: T_EXPENDITURES

Model	R ²	Adjusted R ²	Std. Error of the Estimate	Change Statistics					Durbin-Watson
				R ² Change	F Change	df1	df2	Sig. F Change	
I	.608	.54	5.757	.608	73.6	3	521	.037	2.044

The coefficients of the linear model are found to be significant as well. The reason of this significance is the t-values of the coefficients. All the values are significant in fact some of the values are less significant but still significant enough to accept for the analysis. The significance level is also extremely reliable as it is found under the range of 0.05. The model shows that the coefficient of the number of employees is extremely high which shows that the high effect of number of employees is on the technological expenditures.

Similarly, the firm age is negatively affected by the total expenditures. This could be because the advancements in new technology lead to place a huge spending on the technological expenditures i.e. small age firms are also spending a huge amount of expenditures on technology. Especially, the SMEs with high age group spends a little less because they believe more in hiring employers as compared to enforce technology. Though its coefficient suggests that its affect is very low i.e. though the variable is significant but its affect on the model is very little.

The factor of revenues is in the model is affecting positively and that is because of the positive relation that was suggested because the increase in the revenues of the SMEs leads to the high amount of technological expenditures.

5.5 Coefficients

Model I	Un standardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	19.674	1.644		11.964	.000		
EMPLOYEES	7.529E-5	.002	.002	3.738	.080	.998	1.002
FIRM_AGE	-.008	.038	-.009	-7.63	.033	.997	1.003
REVENUES	2.798	.010	-.037	6.21	.059	.996	1.004

Note: Dependent Variable: T_EXPENDITURES

The model shows that the autocorrelation between the variables is also very that signifies its importance and reliability too. The tolerance level in all the variables is close to 1 which is assumed to be a good measure. Statistics shows the correlation between two variables and indicates the strength of the link with a criterion of relationship, called the correlation coefficient. This ratio is always denoted by a Latin letter R, can take values between -1 and +1, and if the value is closer to 1, it indicates a strong connection, and if close to 0, then the weak.

If the correlation coefficient is negative, it means the presence of the opposite relation: the higher the value of one variable, the lower the value of another. The power connection is also characterized and the absolute value of the correlation coefficient. The correlation between the variables is found to be significant as well. All the variables have high level of significance as it is found less than 0.05. The partial correlation between the variables show that there is no rule followed by the SMEs in Arab countries that if the number of employees are higher in any SME, that results in the more experience and high age of the firm. Similarly, the firm age and the revenues of the firms are positively correlated and that higher age of the firm results in high revenues as well. Though this relationship could become sometimes ambiguous because of the inclusion of technology which shows that whether the firm is old or not but if it has technology, it can certainly increase the productivity, and also the capital increases because of technology. The relation between

the revenues and the number of employees is found to be highly correlated and it logically also showing this relationship i.e. the more number of employees a firm has, it must be required that it has a lot of revenues earned. Again this correlation becomes rarely ambiguous because of the technology makes no difference on the number of employees because capital installments in SMEs will lead to high productivity and that leads to high profit share or revenues share.

5.6 Correlations

Control Variables		EMPLOYEES	FIRM_AGE	REVENUES	
T_EXPENDITURES	EMPLOYEES	Correlation	1.000	-.56	.771
		Significance (2-tailed)	N.A.	.170	.032
		d.f.	0	522	522
	FIRM_AGE	Correlation	-.56	1.000	.513
		Significance (2-tailed)	.031	N.A.	.240
		d.f.	522	0	522
	REVENUES	Correlation	.771	.513	1.000
		Significance (2-tailed)	.032	.031	N.A.
		d.f.	522	522	0

6. The Empirical Model Results

The multiple regression is applied on the model that is discussed in the study. The variables used in the study are technological expenditures, revenues of SMEs, age of the firm and number of employees the firm hired. Several statistical tests and tools are applied including t-t-test, f-test, correlation and multiple regression etc, and fortunately all the tests and tools were found to be significant and no variable was insignificant. This has made the model very strong for future forecasting and analysis. Even the partial correlations between the variables were extremely satisfying giving no chances of multicollinearity. The overall model was found to be significant but further analysis is still required to reach any conclusion about the model.

6.1 Internal Consistency Reliability

The internal consistency reliability measure between the variables shows that the variables are consistent to what extent i.e. the difference within the variable are more that can cause variations and the data sometimes give acceptable results but the consistency must be checked for concluding a good forecasting model. In this linear model, the internal consistency reliability measure founds to be significant as it gives 0.74 that 74% of the data is consistent. This 74% is considered as a good consistent measure and we can conclude that the data is highly reliable within years i.e. not uneven fluctuations are found between the times. The thumb rule for internal consistency is estimated at 0.7 and any value greater than 0.7 assumed to give consistent results.

6.2 Reliability Statistics

The variables need to be checked for the inter-item correlation because partial correlation just provides correlation for the whole data set, but the inter-item correlation divides the data set according to giving condition and then finds the correlation within the divided data to make sure that any outliers has not disturb the correlation to much extent. These correlations internally adjust the data and point the point or nodes where there exist problematic data which can disturb the readings. The inter-correlation matrix results are not much different from the normal correlation coefficients. All the variables that provides positive relationship in the partial correlation giving almost same results in the inter correlation and those who acted negatively on the model in the partial correlation gives negative answers in this correlation as well.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.74	-.56	4

Note: The value is negative due to a negative average covariance among items. This violates reliability model assumptions. You may want to check item codlings.

The data we have taken for the analysis is true and unbiased and also because of the high significance the study is proved to be highly significant. The employees and age of the firm relates negatively in the partial correlation showing that the number of employees does not depend on the age of the firm because technological factor overcome this issue most of the times.

6.3 Exploratory Factor Analysis

The factor analysis is used to understand the autocorrelation bet the explanatory variables.

	Component	
	1	2
VAR00001		.886
VAR00002	.831	
VAR00003	-.597	

Note: Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization; Rotation converged in 3 iterations.

Autocorrelation is the col-linearity between the variances of the error term. This leads to unbiased results i.e. our estimators do not remain BLUE. In the model, the autocorrelation between the variables “revenues” and “age of the firm” is present and therefore it can be concluded that there exist an autocorrelation between them.

7. Conclusion and Recommendations

A questionnaire contains 65 critically evaluated questions were included in the survey and through statistical test it was found that the all the questions were statistically significant i.e. the questions asked in the analysis were according to the study. The regression model was then applied with core variables like revenues, age of firm, number of employees and the technological expenditures on the firm. The dependent variable was technological expenditures on which the other three variables depend.

The SMEs in the Arab countries has great amount of share in the GDP of these countries. These SMEs have been growing with a great pace and this pace has proved to be good such that the

study has been done on analyzing the importance SMEs growth in the Arab regional SMEs in Arab countries have done very little for KM development in their organizations. However SMEs will be in position to deal effectively with demands of present competitive era by managing individual and organizational knowledge. Arab SMEs need to make knowledge resources more productive with the help of proposed KM strategy.

SMEs in the region need to create such an environment which can boost interaction between individuals and teams ensure maximum participation and a high level of motivation to become more creative, competitive and encourage an innovative spirit

There are various statistical tools applied and it was found that all the selected variables for the regression were significant which shows the significance and reliability of the model. The model shows that the Arab countries where SMEs are more aware of technology and are spending much on it have high relatively high amount of revenues generated.

The result of the study shows that in future, if the Arab countries need to fulfill the demands for today, they must have to meet the technological ways and have to spend much on technology in order to get succeed. It is hoped that the future of SMEs will be bright in Arab region provided they take care of the technological factors because the study has proven that the other factors are less affected by it.

The findings indicate that there are significant positive relationships between Government financial supports and private banks loan to SMEs from one side and between the growth performances of SMEs, of which financial partnership is the most significant. Despite the progress so far, it is being widely recognized that government sector and private banks need to capitalize on mutual strengths to accelerate the process of SMEs development and increase productivity so that the promised benefits reach all the stakeholders.

The inability of SMEs themselves to access adequate technological and managerial resources, together with the modest efforts of governments, indicate the need for government financial supports. Improving financial infrastructure should be the priority item in the policy agenda of Arab region countries. Government financing institutions and private banks report that deficiencies in financial infrastructure are one of the major obstacles for further SME lending, and the statistical analysis of the dataset largely confirms this survey result.

Improving financial infrastructure will entail expanding the range of movable assets that can be used as collateral, improving registries for movables, and improving enforcement and sales procedures for both fixed and movable assets. It also entails upgrading public credit registries, and more importantly, introducing private credit bureaus capable of significantly expanding coverage and the depth of credit information.

Based on the above analysis, some policy recommendations are given as follows:

(a) Both Government and private banks should promoting access to finance through developing cooperation between public-private sectors financial institutions and introducing innovative financial instruments to reduce the risks and transaction costs of lending to SMEs. They should try to develop an overall conducive environment to entrepreneurship, innovation and SMEs growth.

(b) Government measures to promote SMEs should be carefully focused, aimed at making markets work efficiently and at providing incentives for the private banks to assume an active role in SME finance. Where necessary, banking systems should be reformed in line with market-based principles.

(c) Governments should play a critical role in promoting an enabling environment in which private banks can fulfill their SME finance targets prudently and responsibly. In the interim, state banks would be well advised to place a higher emphasis on risk management, so that the greater risks they are currently taking in extending SME finance arise from well informed decisions and are better monitored. Likewise, credit guarantee schemes can play an important role and can even be expanded in some countries, but most schemes can be improved in design and should start conducting comprehensive reviews that include evaluations of impact.

(d) Micro-credit and micro-finance schemes play an important role in Arab Region countries and efforts should be made to boost their effectiveness and diffusion.

(e) Developing education sector to increase the availability of skillful human capital, which is essential for SMEs growth and prosperity. Further enhancing cooperation between public and private sector educational and research institutions will also help improving technological capabilities of SMEs.

(f) Develop an environment that supports the growth and dissemination of innovative technologies for and by SMEs to take advantage of the knowledge-based economy.

Finally, it is important to recognize that the potential for SME finance is also a function of the structure of the economy and the size of the SME sector. In the case of Arab non-GCC countries, there is huge potential for expanding SME finance, with large numbers of smaller enterprises underserved and low levels of bank competition to serve them. In the case of GCC countries, the size of the SME sector may remain more constrained by the nature of oil economies, but there is also scope for further SME finance, especially if access to finance is also expanded for resident non-nationals. But if public- and private-sector actors are willing and able to take these steps, both may realize the potentially significant benefits of developing their local SMEs, including improved access to technological, human and financial resources. This will further improve the capacity of SMEs to solve problems that cannot be addressed by a single actor. Government financing supports to private banks also may contribute to the improvement of livelihoods for a major portion of small entrepreneurs, and other vulnerable individuals and households in the region countries.

Future research can be conducted to identify solutions to these problems, and more in-depth studies are needed to better understand the ground realities associated with GFS and private banks implementation in SME sector.

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