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Internal and external obstacles facing medium and large enterprises in Rusayl Industrial Estates in the Sultanate of Oman

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Abstract

Industrial Estates are significant for the growth of any economy. In this research, the business mangers' perceptions of the internal and external obstacles facing medium and large enterprises in the Industrial Estates are collected and analyzed. The research is conducted with special reference to the Rusayl Industrial Estate (RIE), a prominent Industrial Estate in Oman. A structured questionnaire was administered to a sample of 42 enterprises in the RIE. The survey discovered that medium enterprises reported more obstacles, both internal and external, compared to larger enterprises. Among a variety of external barriers, the lack of raw materials, the lack of skilled workers, visas for foreign workers and the high interest rate of business loans, are at the top of the list. The most significant internal obstacles are competitive pressure in the market, difficulty of external marketing, high labor cost and high operating cost. Some challenges, such as lack of skilled workers and difficulty getting visas for foreign workers are common to medium and large enterprises alike. The study emphasized the need for strategic intervention by regulatory agencies primarily aimed to mitigate the various challenges and provide a conducive environment for enterprises to develop.

Keywords: Industrial estate, External and internal barriers, Medium and large enterprises

Introduction

The economies in the Middle East, including the Sultanate of Oman, were affected by the reduction in crude oil price, apparent from the decline in nominal GDP by 5.1% in 2016, on top of a drop of 13.8% in 2015 (Central Bank of OmaCentral Bank of Oman 2016). The oil sector contributes significantly to the economic growth in the Middle East. In other words, countries in the Middle East are dependent on petroleum resources and any variations in the output of oil resources or its price in international market significantly affects the savings. In the Sultanate of Oman, the oil sector contributes to more than 77% of government revenues, 62.5% of exports and 51.6% of the growth domestic product (National Center for Statistics and Information 2015). To mitigate the challenges posed by dwindling oil reserves and oil price crisis, the International Monetary Fund (2016) addressed the need for economic diversification through focusing on non-oil sectors. At present, the non-oil private sectors remain relatively small and, consequently, have been only a limited source of growth and employment (IMF 2016). In the Sultanate of Oman, the development of non-oil sectors has taken utmost priority in various plans and policies (Oman Vision 2020). However, statistics highlighted that the construction sector has the highest contribution in the non-oil sector (44.5%) followed by manufacturing sector (42.1%) and mining and quarrying (2.7%) in 2016. The share of the manufacturing sector was only 8.5% of GDP in 2016.

Industrial growth, by developing both SME and large enterprises, is decisive for economic growth. Efforts are evident in the initiatives to develop non-oil sectors through continuous encouragement by the government through soft loans, good infrastructure and facilities, import duty exemptions, etc. The establishment of The Public Establishment for Industrial Estates (PEIE) in 1983 posted a new era in industrial development of the country. Industrial estates have been set up since then; Rusayl Industrial Estate (RIE) in Muscat (1985), Suhar Industrial Estate (1992), Rysut Industrial Estate (1992), Nizwa Industrial Estate (1994), Sur Industrial Estate (1999), Bureimi Industrial Estate (1998), Al Mazunah Industrial Estate (1999), and Samail Industrial Estate (2010).

Review of research on industrial development in Oman showed that the research on challenges faced by the organizations were mainly focused on SMEs (e.g., Al-Kharusi 2003; Al-Shanfari 2012; Christina et al. 2014; Al Barwani et al. 2014; AL-Bulushi and Anderson 2017; Al-Mataani 2017; and Al-Rahbi 2017). Significantly, the comparisons of the enterprise size and obstacles faced by them in the Industrial Estates remain rather rare in Oman.

Against this background, this research focuses on business mangers' perception of the internal and external challenges faced by medium and large enterprises with particular reference to Rusayl Industrial Estates in the Sultanate of Oman. We hypothesize that many of the challenges faced by the medium and large enterprises are not common and hence require specific intervention strategies. The Rusayl Industrial Estate is located in the capital city and is the most active among the other Industrial Estates in terms of volume of activity and number of enterprises.

Literature review

Obstacles faced by SMEs and large enterprises are explained in many previous studies, however, the attempt to understand the challenges faced by medium and large enterprises are rarely focused on industrial estates, particularly in the GCC sector. The growth of industrial estates was the outcome of a planned effort, in the GCC region, to nurture growth through diversification of the economy from over-dependence on the oil sector. Industrial estates are perceived as an integral part of development strategies of many countries worldwide (Singhal and Kapur 2002). However, to develop industrial estates as a strong pillar in the development process requires a focused attention that addresses how the various obstacles for the development of enterprises in the industrial estates are addressed.

Industrial estates are specific zones for industrial activity in which infrastructure such as roads, power, and other utility services are offered to help the growth of industries and to minimize impacts on the environment. (World Bank 1995). The development process undoubtedly recognizes the importance of infrastructure and facilities for building competitive capacity (Victorian Government 2008). Regrouping of industrial facilities to a narrowly defined location, called industrial estates, facilitated focused attention for the enterprises operating in the region and also resulted in relocating the industrial facilities from densely urbanized areas (Laplante 2012).

SMEs and large enterprises- measures and constructs

The available literature on small and medium enterprises (SMEs) in the Middle East shows the importance of SMEs to build resilience against the over-dependence on oil resources and to further the growth of non-oil industrial sectors. SMEs is often commended for its role in higher employment ratios, sustainable and inclusive development (OECD 2017).

SMEs are defined based on different criteria and standards. For example, the World Bank (2017) used three parameters to define SMEs; number of employees, total assets and annual sales (Berisha and Pula 2005). When we analyze the criteria used, it is obvious that there are deviations in the cutoffs (lower boundary and upper limit), on the number of employees and sales turnover in the various definitions. OECD defined an SME as firms employing up to 249 persons, with the following breakdown: (a) micro enterprises: 1 to 9 employees, (b) small enterprises: 10 to 49 employees, and (c) medium enterprises: 50–249 employees (OECD 2017). In the Sultanate of Oman, SMEs were defined earlier solely based on the number of employees. In 2012, the Ministry of Commerce and Industry (MOCI) revised the guidelines and introduced two indicators/criteria; the number of employees and sales turnover to differentiate between micro, small and medium sized enterprises (Muscat daily, June 29th, 2012). Micro-enterprises in Oman are defined as establishments that employ fewer than 5 workers and having annual sales of less than RO 100,000 while firms with 6–25 workers with annual sales ranging between RO100,000 – RO 500,000 are considered small. Medium enterprises consist of 26–99 workers with annual sales ranging between RO 500,000 to RO 3,000,000. It may be observed that there exists a difference in the measure (number of employees) in OECD and MOCI. Enterprises with more than 100 employees are termed as large enterprises.

In the Industrial Estates, both medium and large enterprises operate; these enterprises differ in their level of innovation, product range, employment, orientation, etc. Considering these differences, many countries have established specific industrial estates for medium and large enterprises, for example, the Industrial Estate for SMEs in Uttarakhand in India (Prashant and Dun 2013). However, in the Sultanate of Oman, both medium and large enterprises operate in the same industrial estates and are treated similarly in terms of facilities as well as compliance with the requirements.

Challenges faced by Industrial Estates

The literature on challenges faced by industrial estates applied a broader outlook than that which focused on the specific challenges faced by the medium and large sized companies. Studies focusing on industrial estates in Oman are rare; hence the focus in this section is to brief the major challenges faced by enterprises operating in the industrial estates in the GCC and MENA.

Abo Karsh (Karsh: Cities and industrial areas of the Palestinian, unpublished) highlighted that the lack of infrastructure facilities such as technical infrastructure, online networks, power grids, water and sanitation are the challenges faced by industrial estates in Palestine. Similarly, AL-Qodra (2007), referring to the Gaza industrial zone, highlighted that industrial estates provide ineffective incentives to investors and the other challenges include the lack of security and political stability, and high investment costs. This is likewise acknowledged by Mosbeh (2011) who reported that political instability and the negative impact of trade tunnels inside the urban centers and industrial areas inside the Gaza Strip have affected the investors. In addition, inadequate funding facilities and lack of support in fostering exports are also important challenges faced by companies in Industrial Estates. Wahba and Ortiz (2009) explained that the main challenge faced by enterprises in industrial estates in the Middle East is the mismatch between the demand and supply. They pointed out that the challenges include inadequate location (vs. Infrastructure, labor markets), unsuitable sites (inadequate parcel sizes, inflexible subdivision plans, inability to expand), poor quality infrastructure, inadequate zone management and maintenance, and unaffordable cost of land acquisition (lack of financing options).

In Jordon, Al-Khouri and Al-Qudah (2006) in a study based on 78 enterprises in the Industrial zones, listed that the challenges include ineffective policies on recruiting foreign labors and political instability. Similarly, Khrais et al. (2010) pointed out that the low level of basic services, poor infrastructure, customs requirements and visas are major impediments to the garment industry sector in Jordan. Shah et al. (2011) stated that the challenges faced by enterprises include anarchy and terrorism, power outages, energy costs, locational disadvantages, lack of skilled labor force and inconsistent government policies.

Singhal and Kapur (2002) emphasized that the formation of ecologically balanced industrial systems is critical for Industrial estates, which will otherwise pose a serious threat to both local and global sustainable development initiatives. Panyathanakun et al. (2013) identified that building effective stakeholder collaboration is a major challenge faced by industrial estates. Doguwa et al. (2010) mentioned the obstacles and challenges faced by medium enterprises in Nigeria include infrastructural gap, insufficient power supply, lack of access to credit, lack of technical skills, high interest rate, unclear economic laws, unfavorable trade policy, poor investment climate and unfavorable economic climate.

Obviously, the majority of the challenges listed by enterprises in the Middle East region include problems related to government policies, infrastructure inadequacy, labor laws, inadequate support for marketing the products and political instability. It is significant to mention that these elements are common in industrial lands, though the intensity of these components varies in different areas.

Challenges faced by small, medium and large businesses in Sultanate of Oman

Literature on SMEs and large enterprises in Oman shows that the challenges faced by enterprises are pervasive and include HR related issues, financial issues, operational issues, marketing issues, policy related and legal impediments. These challenges can be grouped into internal and external. Al Belushi and Bagum (2017) categorized the challenges into HR related (e.g. lack of managerial skills, lack of knowledge to hire related employees), financial management (e.g. lack of availability of credit, lack of long-term credits, working capital management issues, high cost of finance, lack of marketing budget), operations management (e.g. lack of accurate knowledge of outsourcing and supplier's management, lack of access to latest technology), and marketing management (e.g. lack of marketing knowledge, lack of R&D to identify new markets and products). Similarly, Al-Mataani (2017) concluded that the challenges faced by SMEs are mainly bureaucratic related caused by rigid regulations, inefficient labor market, immature entrepreneurship education, and support policies. Further, there are certain pertinent issues related to the mindset that relates to the risk aversion culture, the lack of an entrepreneurial mindset, and undervaluing self-employment. The limited entrepreneurial mindset leads societies to fail to acknowledge and appreciate high achieving entrepreneurs by giving higher status to certain professions than successful entrepreneurs (Al-Shanfari et al. 2013; Porter 2004).

Al-Shanfari et al. (2013) noted that the complexity of regulations, procedures and government red tape are amongst the biggest barriers for the industrial development of the region. Similarly, Christina et al. (2014) explained that the challenges include; policy and administrative challenges and marketing and financial issues. This also accords with the Global Competitive report 2016 wherein it is mentioned that the most critical factors that hamper enterprises in Oman are related to rigid labor regulations, lack of an educated workforce, and government bureaucracy (Schwab 2016). The problems related to bureaucracy in Oman have been well-documented in the literature of (Dechant and Lamky 2005). However, Al-Belushi and Anderson (2016) found contradicting results in his survey with 60 Omani SME owners in examining how well formal and informal programs support entrepreneurship. They found that involvement of formal institutions, such as the related laws and regulations (e.g. those offered by Rafid, Intilaqaha, Riyada) were very supportive; initial funding was readily available. On the other hand, the study found that informal structures (e.g. Norms, beliefs and values of citizens) were less developed.

Another key challenge listed in the literature is the access of finance. Access to finance and government intervention to support SMEs to ease their funding requirements (rate of interest, grace period, subsidies, etc.,) are essential for adequate funding for different activities. Mostly, SMEs receive financing from commercial banks. Al Barwani et al. (2014) mentioned that banks prefer to finance those SMEs that are already established. The major difficulties faced in this context are; high interest rates, incomplete business plans, high failure risks, lack of commitment, and lack of securities/collateral. The difficulty of obtaining finance from banks was also raised by several other studies (e.g. Al-Kharusi 2003; Khan and Almoharby 2007; Al-Shanfari et al. 2013, Al Barwani et al. 2014). This was reflected in the World Bank (doing business 2014) ranking where Oman ranks 86 out of 183 for ease of obtaining credit. Ennis (2015) confirmed this in his interviews with bank officials where they conveyed unwillingness to fund startups: 78% of GCC banks indicated that their collateral requirements are higher for SMEs than for larger corporations and that SMEs lending is 82% more risky than large corporate lending (Rocha et al. 2011).

Al-Shanfari (2012) noted that although the industrial environment in Oman is positive, given the political stability, quality living standards and young population, the hindering factors have not yet been corrected. This is true from the challenges listed above given that Oman is still struggling to produce enough entrepreneurial capacity. Moreover, it is surprising that the same obstacles have been appearing for the past 15 years with only very little improvement despite all the research efforts.

Challenges faced by SMEs versus large enterprises in different countries

The comparative studies on challenges faced by small, medium and large enterprises are limited in Oman context. It is evident from the review of literature that the problems and challenges faced by SMEs (Muscat Daily 2012) and large firms vary greatly; several studies found that small firms face larger growth constraints and have less access to formal sources of finance (e.g., Al-Kharusi (2003); Beck et al. 2006; De and Nagaraj 2014; Ramukumba 2014). Islam and Karim (2011) investigated the relationship between size of manufacturing organizations and their performance. They found that SMEs consider product quality and reliability a basic competitive advantage, while large industries consider company reputation an important competitive dimension. Thus, SMEs have been shown to improve their manufacturing practice more effectively than do large companies.

In a comparative study based in Tokyo, Yoshino and Taghizadeh-Hesary (2016) explained that the differences are mainly; higher transaction costs relative to large enterprises, inability to compete against larger firms in terms of R&D expenditure and innovation, increased market competition and concentration from large enterprises caused by globalization and economic integration, and access to finance. As stated earlier, many banks prefer to allocate their resources to large enterprises rather than to SMEs because large enterprises have a lower risk of default and their financial statements are clear. Similarly, Beck et al. (2006) and Beck (2007) found that small firms report significantly higher financing obstacles than medium firms, and both groups of firms report higher financing obstacles than large firms. It is also likely that SMEs are more vulnerable to credit crunches during economic downturns or financial crises than larger enterprises (European Central Bank 2016). Several studies in China (e.g. Shen et al. 2009; Ji 2011; and Yin 2012) concluded that large firms face much fewer obstacles, not only in finance, but also in sales and have greater growth compared with smaller businesses. Moreover, Wang (2016) found that SMEs are more likely to perceive finance, tax, competition, and electricity as significant constraints that impede their growth than large firm. These results are also aligned with the results of Ali (2016), in their study of 515 food and agribusiness firms in India, where he found that large enterprises perceive more challenges with telecommunication services, customs, trade regulations, and corruption; while small and medium firms face greater constraints in gaining access to land and finance.

In an older study in 2010, United States International Trade Commission (2010) reported comparison between SMEs and large firms in both the manufacturing and service sectors in the USA. This study's results corroborate with the findings of previous work in the field. The most important obstacle for the SMEs in the manufacturing firm was obtaining finance, high tariffs, or transportation and shipping costs. SMEs also consider foreign regulations and customs procedures barriers for doing business abroad; whereas large manufacturing firms reported difficulties in foreign regulations or preference for local goods or services in a foreign market. For SMEs in the services sector, the greatest concern was language or cultural barriers, or foreign sales not being sufficiently profitable. In contrast, the most important impediment for large service providers was either difficulty locating foreign sales prospects or foreign regulations. Moreover, in the United Kingdom, Jamieson et al. (2012) explored the relationships between middle sized businesses and large businesses of 506 respondents and found that middle sized business face obstacles due to late payments, compliance with red tape and bureaucracy (originating from larger businesses as well as the government), access to finance, increasing pressure from procurers to drive costs down, and the need for additional information and support (especially if the business was expanding into new areas).

Having reviewed the challenges facing the manufacturing sectors in different countries, the challenges facing SMEs in Oman, and how different research have compared the challenges facing SMEs with large enterprises in different business milieu. This study aims to determine the internal and external challenges facing different firm sizes (e.G. *medium* size enterprises versus large enterprises) in the manufacturing sector in Rusayl industrial estate in Oman. Hence, results from this study will help promote investment in this area.

Research methodology

Research environment

Rusayl Industrial Estate (RIE) is situated 45 km from Muscat and occupies 7.9 million square meters. It was established in 1983 with 12 factories and it now has 225 factories. Factories in operation produce a wide spectrum of consumer as well as industrial-oriented products, including but not limited to chemicals, batteries, electrical and building materials, fiber optic cables, food stuff, textiles, garments, stationery and paints. RIE provides its tenants with facilities and services which include: factory and office space, electricity, water, gas, telecommunications, sewage treatment, disposal of solid and other wastes, housing, internal and external road networks, mosques, banks, restaurants, supermarkets, a post office and a clinic.

Research respondents

The total number of companies operating in RIE is 163 as reported in the statistics provided by Public Establishment for Industrial Enterprises (PEIE). One hundred forty-nine companies are limited liability companies (LLC), while the public limited (SAOG) and private limited companies are 12 and 2 respectively. Sixty companies are

Table 1 Companies in Public Establishment of Industrial Estates - PEIE

Number of employees	Categorization	Population	Participants	Ratio
100 and more	Large	51	25	49%
26–99	Medium	61	29	48%
6–25	Small	37	0	
1–5	Micro	14	0	
Total		163	54	33%[a]
Large + Medium		112	54	48%[b]

[a]Ratio out of all enterprises in the Rusayl area
[b]Ratio out of only large & medium enterprises in the Rusayl area

operating in the manufacturing sector, while 49 companies are in service sector. Table 1 shows 163 enterprises: 51 of them have more than 100 employees (large), 61 are medium (26–99 employees), 37 are small (6–25 employees), and 14 are micro (1–5 employees) in size. For this study, the company size is determined based on the number of employees in the firm.

Stratified random sampling was adopted to select a sample for the study. Initially, the total population was divided based on the number of employees, followed by the sector and the ownership type. The questionnaire, with a covering note regarding the confidentiality clause, was handed to the respondents during office visits.

Ponnamperuma (2000) mentioned that the criteria for classifying enterprises based on number of persons employed is reasonable because they distinguish between enterprises regardless of the amount of capital investment or revenue due to periodic changes in the economy. Varghese (2011) also supported it because of the non-availability of financial data in the Gulf. Magd and McCoy (2014) also confirmed the difficulty to come up with a threshold of revenue or net profit for comparison even if a comparison is carried out with organizations with similar characteristics operating in the same industry.

Research instrument

This study adopts a quantitative approach by using survey method to collect data. A self-administered questionnaire is utilized to get the business mangers' perception of the internal and external obstacles facing medium and the large enterprises in Rusayl Industrial Estate. This approach helps to collect information from a large number of participants (Nardi 2018), it saves time and resources (Bryman 2001) and it is ideal when information is sought on opinions, attitudes, views, or beliefs (Hammarberg et al. 2016). Moreover, quantitative methods provide an overview about the topic under investigation and its heterogeneity on a large scale (Kelle 2006).

The questionnaire was adapted from Al Barwani et al. (2014), Mosbeh (2011), Lukjanska (2010), Džafić et al. (2011), and Talegeta (2014). It contains of four parts:

Part 1: It consists of 16 items on the demographic information of the firms such as nature of the business, form of ownership, capital of the business, source of fund, size and age of the firms, revenue and ratio of growth.

Part 2: It measures the business manager's perception, on 6 statements of the internal barriers.

Part 3: It consists of business manger's perception, on 12 statements of the external barriers with respect to the support given by the Public Establishment Industrial Estates (PEIE). These statements are mapped against PEIE objectives.

Part 4: It contains 13 statements concerning external barriers with respect to the government support.

In parts 2, 3 and 4, the business managers were required to give their perceptions in a five-point Likert scale: "strongly agree", "agree", "neutral", "disagree" and "strongly disagree". The survey instrument showed a reliability of 0. 932 based on Cronbach's Alpha.

The lists of internal and external barriers are obtained from the Organization for Economic Co-operation and Development (OECD). OECD, in glossary for SMEs barriers, has defined internal barriers as those associated with organizational resources/capabilities and they are within the firm's control such as informational barriers, human resource barriers, financial barriers, product and price barriers, organizational culture, inadequate R&D, lack of cooperation and distribution, logistics and promotion barriers. OECD has defined external barriers as barriers stemming from the home and host environment within which the firm operates and they are not within the firm control such as procedural barriers, governmental barriers, business environment barriers, and lack of skilled personnel. The same set of barriers were also used by Lukjanska (2010); Džafić et al. (2011) and Talegeta (2014).

Results and discussion

Demographic profile

The analysis revealed that most of firms (both large and medium sized) in RIE are limited liability company (55%) and 19% are both closed joint stock company (SAOC) and open joint stock company (SAOG). In terms of ownership, out of 23 large firms: 8 are joint stock, 7 are partnership and 5 are sole ownership. For the 19 medium firms; 12 are partnership, 3 are joint stock and only 2 are sole ownership and the rests as others. These firms are well established: 20 of the large firms and 14 of the medium firms have been operating more than 10 years. This means the environment in Rusayl is good for growing and the industrial climate is good for investment.

Capital is required to achieve growth in the manufacturing sector. Most of the large firms (13) started their businesses with OMR 500,000 to 3,000,000; while most of the medium size started with OMR 100,000 –500,000) Table 2). The majority of these firms, both large and medium, generate a revenue of more than OMR 300,000 yearly (Table 3). However, an equal number of large and medium firms (5) reported making OMR 200,000- OMR 300,000 yearly. Several firms did not report the revenue; perhaps this is one reason for the scarcity of financial data availability and transparency. Al-Kharusi (2003) found that SMEs in the same place had a turnover of less than OMR 100,000. We can see there is an improvement in growth over the last 15 years.

Table 4 depicts the growth ratio over the past 5 years for the participating companies. As anticipated, large companies have higher growth rate: seven large companies have 20–30% growth rate; whereas seven medium companies have less than 10% growth. Moreover, it is worth noting that 52% of the large firms have 20–40% growth rate while 63% of the medium firms have less than 20% growth rate. As evident in Table 5,

Table 2 Capital of business

	Large	Medium
More than 3000,000 OMR	4	1
500,000–3000,000 OMR	13	6
100,000–500,000 OMR	3	12
Missing	3	

Table 3 Revenue in a typical year

	Large	Medium
More than 300,000	13	8
Between 200,000- 300,000	5	5
less than 100,000	1	3
Missing	4	3

majority of enterprises have used their own funds, while only few firms took loans to finance their businesses.

Source of the raw materials

It was found that more than 70% of raw materials are imported from other countries (large 76% and 70% medium) while only 30% of the materials are bought locally. This brings the attention to having sufficient stock of raw material locally and reducing reliance on importing raw materials by increasing recycling and lowering the quantities of materials in product design to reduce consumption of raw materials.

Length of time to get approval to start business

Regulations including procedures and their costs are amongst the critical factors that influence entrepreneurship environment. Many firms (large and medium) reported that 4–12 months are required for approval to start the business; while 4 medium firms took more than 1 year and 7 large firms took less than 4 months. The Doing Business 2017 report ranked Oman 66th out of 190 nations in the list, a drop in the ranking as compared to 2014 where the rank was 60. However, there is an improvement in the number of procedures, time required and cost to start a business; (i.e. procedures = 4.5; days required = 6.5; minimum capital required = 0).

Organizations visited for getting approval to start the business

Table 6 lists the organizations visited for getting approval to start the business. The business managers were to select all those applicable. It is apparent that many organizations and ministries need to be visited to get approvals and licenses for starting the business. Multiple and sometime overlapping agencies have created redundancies and consumed time, effort, and money from SMEs owners (Al Belushi et al. 2012). Thus, Oman needs to simplify the registration and licensing procedures to encourage business growth by having a simple, transparent, efficient and cost effective way. These lengthy processes can eventually hinder and discourage entrepreneurs from opening a

Table 4 Growth ratio over past 5 years

	Large	Medium
More than 40%	3	1
30–40%	5	2
20–30%	7	2
10–20%	2	5
Less than 10%	3	7
Missing	3	2

Table 5 Sources of fund

	Large	Medium
Own funds	15	17
Oman Development Bank	1	1
Investment from other companies	2	
Commercial bank	1	
Others	2	
Missing	1	1

business. In order to make the process more appealing to entrepreneurs, Oman needs to encourage the use of electronic systems that enable entrepreneurs to submit company registration applications, make payments and receive registration certificates quickly and cost effectively through a one-stop-shop, especially as most of the MENA countries such as Bahrain, Egypt, Jordan, Kuwait, Lebanon, Morocco, Tunisia and UAE have established one-stop shops in their zones (OECD 2009).

Business mangers perception of the internal barriers

The most interesting finding is that business managers working in medium firms have rated the internal challenges higher than their counterparts working in larger firms. The methodology for classifying the various challenges follows Džafić et al. (2011), the challenge level has been categorized as major, moderate and minor.

- Major: challenge creates considerable difficulties for doing business (average score 3.50–5.00);
- Moderate: challenge creates certain difficulties for doing business – (average 3.00–3.49);
- Minor: challenge can be neglected – (average is less than 3.00). However, if the statement is phrased positive, then average is less than 3.00 is considered major and more than 3.5 is considered minor.

As evident in Table 7, the medium size enterprises reported that the main challenges include; competitive pressure in the market (3.75); and high labor cost (3.63). They have also expressed disagreement with the cost of the business operation (2.50) and external marketing (2.81).

These findings corroborate previous studies where they have compared obstacles of SMEs versus large firms especially in access to finance and market competition (e.g. Beck et al. 2006; Beck 2007; Shen et al. 2009; Ji 2011; and Yin 2012; Jamieson et al.

Table 6 Organizations visited for getting approval to start the business

S.N	Organizations	count	%	S.N	Organizations	count	%
1	Ministry of Commerce and Industry	40	13%	6	Municipality	30	10%
2	Ministry of Manpower	38	12%	7	Civil Defense	25	8%
3	Ministry of Environment	35	11%	8	Banks	25	8%
4	Oman Chamber of Commerce	33	11%	9	Electricity company	21	7%
5	PEIE	33	11%	10	Others	4	1%

Table 7 Challenges related to the internal barriers

Items	Medium		Large		Chi Square			Challenge	
	Mean	SD	Mean	SD	F	Df	Sig	Med	Large
1. The establishment cost of the business is reasonable	3.06	1.12	3.77	0.81	14.507[b]	4	.006	Moderate	Minor
2. The operation cost of the business is reasonable	2.50	1.37	3.45	0.80	10.468[a]	4	.033	Major	moderate
3. External marketing of the product is easy	2.81	1.11	3.09	1.11	1.057	4	.901	Major	Moderate
4. Lack of state of the art technology to operate the business	3.25	1.29	2.73	0.98	7.699	4	.103	Moderate	Minor
5. High labor cost	3.63	1.45	3.32	1.25	2.947	4	.567	Major	Moderate
6. Competitive pressure in the market	3.75	1.13	3.45	1.01	1.916	4	.751	Major	Moderate

[a]Significant at 0.05 level
[b]significant at 0.01 level

2012; Yoshino and Taghizadeh-Hesary 2016; Wang 2016; Ali 2016). That is because banks prefer to allocate their resources to large enterprises rather than to SMEs because large enterprises have a lower failure risk (Khan and Almoharby 2007; Al-Shanfari et al. 2013, Al-Barwani, 2014; Ennis 2015). Previous studies found SMEs face challenges pertaining to the marketing of their products due to unqualified employees in the marketing department, inadequate finance to undertake marketing research, or to go international, and to participate in trade fairs (Berry 2002; Osei et al. 2016; Al Belushi and Bagum 2017). For SMEs to be successful they have to continuously increase their market share and target the right market towards company's products and service. Porter (2004), in Al-shanfari (2012), noted many challenges facing SMEs in Oman, such as having a small market size, low market purchasing power, competitive imported products, and weak connections to export markets.

Competitive pressure is normally caused by both domestic and foreign enterprises as has been identified in the literature in different countries. For example, in EU, Kőrösi et al. (2006) noted that in addition to the pressure from the domestic market, the freedom of access by foreign firms to sell their products domestically has also caused competitive pressure to arise from imports. In East Europe and Central Asia, Bernini (2012) argued that domestic competition cause more financial constraints than foreign competition. In Vietnam, the basic economic obstacles of SMEs are due to the competitive pressure from domestic and foreign enterprises (Tran 2015). In Ghana, globalization and access to technology has increased competitive pressures on all firms (Ocloo et al. 2014).

Results of Chi-Square tests showed that the medium firms are significantly less satisfied (3.06) with cost of business establishment than the larger enterprises (3.77) (X^2 (4, $N = 42$) = 14.705, $p < .01$). Similarly, they are significantly less satisfied (2.5) with the operation cost than large firms (3.45) (X^2 (4, $N = 42$) = 10.468, $p < .05$). In the Global Competitiveness Report 2016–2017, competition remains constrained throughout the gulf region and Oman scores the lowest among them, in particular on the extent of intensity of local competition, market size and business sophistication. The level of domestic competition and openness to foreign trade and investment remains below OECD levels for most gulf countries (Schwab 2016). Several studies in China (e.g. Shen et al. 2009; Ji 2011; Yin 2012; and Wang 2016) concluded that large firms face much fewer obstacles, not only in finance, but also in sales and have greater growth compared with smaller businesses.

Business mangers perception to the external barriers - public establishment of industrial estates in Rusayl

Similar to the findings in the previous section, the analysis revealed that medium enterprises differ in their level of satisfaction (showed a higher agreement) than their large business counterparts on the external barriers caused by PEIE. Quality of infrastructure services such as roads, water, electricity and telecommunications affect the growth of the businesses. The results shown in Table 8 indicate that both firm sizes believe there is sufficient infrastructure, the quality of electricity and water services are adequate for the business; and PEIE assists them by providing guidelines to operate the business.

The Doing Business report (2016) noted that Oman has modern infrastructure with good roads, airports, sea ports, and state of the art telecommunications and other services. Other researchers in different countries found investors face challenges in terms of infrastructure and facilities at the industrial zones. For example, in Pakistan, Shah et al. (2011) in their study of the problems facing the Hayatabad industrial estates, reported power outages, energy costs and location are major impediment for investors. In Ethiopia, Gizaw (Gizaw: Industrial zone development in Ethiopia challenges and prospects to explain the case of Eastern industrial zone, unpublished) also reported lack

Table 8 Business mangers perception of the external barriers related to PEIE

Items	Medium		Large		Chi Square			Challenge	
	Mean	SD	Mean	SD	F	df	Sig	Med	Large
1. The laws at PEIE encourage investment	3.13	1.20	3.86	0.99	15.833[b]	4	.003	Moderate	Minor
2. PEIE encourages exports	3.25	1.18	3.41	0.91	23.408[b]	4	.000	Moderate	Minor
3. Industrial relations at the PEIE attract investments	3.13	1.09	3.36	1.09	11.379[a]	4	.023	Moderate	Minor
4. PEIE maintains cooperation with related regional and international organizations to support investors	3.06	1.12	3.50	0.96	9.489[a]	4	.050	Moderate	Minor
5. Lack of logistic facilities	2.88	0.72	3.05	1.21	11.134[a]	4	.025	Minor	Moderate
6. The rent of lands and building are reasonable	3.31	1.08	3.86	0.94	7.625	4	.106	Moderate	Minor
7. The quality of electricity and water services are adequate for the business	3.50	1.21	3.82	1.01	1.578	4	.813	Minor	Minor
8. The electricity and water charges are high	3.00	1.15	3.09	1.02	1.570	4	.814	Minor	Moderate
9. PEIE assists the investor by providing guidelines to operate the business	3.50	0.97	3.59	0.91	6.091	4	.192	Minor	Minor
10. PEIE provides support to overcome obstacles faced by investors	3.25	1.06	3.55	0.74	6.565	4	.161	Moderate	Minor
11. There is an active association consisting of the different investors	3.06	1.06	2.55	0.96	4.980	3	.173	Moderate	Major
12. insufficient infrastructure	2.88	1.15	2.73	1.08	1.790	4	.774	Minor	Minor

[a]Significant at 0.05 level
[b]significant at 0.01 level

of water supply and poor environmental management plan. Studies conducted in Gaza and Jordan industrial zones (AL-Qodra 2007; Al-Khuri and Al-Qudah, 2006; Khrais et al. 2010; and Mosabeh, 2012) reported high investment cost, getting credit, financing policy, and political instability are the main challenges facing business owners. According to the World Bank Enterprise surveys for 89 economies, 15.6% of managers consider electricity the most serious constraint. Hence, the challenges faced by investors in Gaza, Jordon, Ethiopia and Pakistan are different from those challenges faced by the businesses in Oman. This is rather contradictory, which may be due to political situation of these countries.

According to Chi-square tests, the medium enterprises have rated the PEIE efforts significantly less than the large firms in different areas: they have rated the laws at PEIE encourage investment significantly less (3.13) than the larger enterprises (3.86) (X^2 (4, $N = 42$) = 15.833, $p < .01$); they have rated PEIE encouragement of export industries significantly less (3.25) than the larger enterprises (3.41) (X^2 (4, $N = 42$) = 23.408, $p < .01$); they have rated PEIE industrial relations to attract investments significantly less (3.13) than the larger enterprises (3.36) (X^2 (4, $N = 42$) = 11.379, $p < .05$); and they have rated PEIE cooperation with related regional and international organizations to support investors significantly less (3.06) than the larger enterprises (3.350) (X^2 (4, $N = 42$) = 9.489, $p < .05$). However, the larger firms reported lack of logistics facilities (e.g., terminals, distribution centers, or production sites) significantly more (3.05) than medium firms (2.88) (X^2 (4, $N = 42$) = 11.134, $p < .05$). Another important finding is that large enterprises in this study are not happy with PEIP's efforts of association with different investors in Rusyl area (3.06 for the medium and 2.55 for the large). Working together, firms can gain the benefits of collective efficiency, enabling them to link with larger producers and break into national and global markets (OECD 2005). Thus, PEIE needs to enhance the association among the different enterprises.

Section 4: Managers' perception of the external barriers- government support

As noted in Table 9, the most rated external challenges for medium size enterprises are lack of raw materials, difficulty in getting visa for foreign employees (3.75), and lack of skilled workers (3.63). The following areas also place undue pressure on medium enterprises: interest rate of business loan (2.81), tax exemptions (2.93), licensing/registration procedures (3.00) and the policies for environment and other related approval (3.00).

According to Chi-square test, medium enterprises rated easiness of licensing and registration procedure (3.00) significantly less than the larger enterprises (3.55) (X^2 (4, $N = 42$) = 11.875, $p < .05$). It was shown in the demographic section of the participating firms that many firms, both large and medium, took 4–12 months to get approval to start the business; while 4 medium firms took more than 1 year, and 7 large firms took less than 4 months. In addition to the need to visit several organizations to get the approval. Inefficient government and bureaucracy are the most problematic factors for doing business in Oman as per the Global Competitiveness Report (Blanke et al. 2009). Further, Oman was ranked 65 out of 183 in ease of doing business in 2010 (World Bank 2010). Al-Shanfari (2012) also found that administrative and licensing procedures involve many restrictions, complexity, and bureaucracy. There is surprising no significant improvement in Oman to date on this aspect.

Table 9 Business manager's perception of the governmental support

Items	Medium		Large		Chi Square			Challenge	
	Mean	SD	Mean	SD	F	DF	Sig	Med	Large
1. Licensing/registration procedures are quick and easy	3.00	1.26	3.55	0.91	11.87[a]	4	.018	Moderate	Minor
2. Lack of raw materials	3.75	0.93	2.82	1.01	9.284	4	.054	Major	Minor
3. The interest rate of business loan is reasonable	2.81	1.28	3.36	0.85	6.423	4	.170	Major	Moderate
4. There are many opportunities to get business loans	3.19	1.22	3.55	1.18	3.128	4	.537	Moderate	Minor
5. The policies for environment and other related approval are easy to achieve	3.00	1.41	3.00	1.11	6.040	4	.196	Moderate	Moderate
6. The visa for foreign employees is expensive	3.63	1.09	3.14	1.13	5.968	4	.202	Major	Moderate
7. Getting visa for foreign employees is difficult	3.75	1.44	3.55	1.22	5.182	4	.269	Major	Major
8. Industrial climate in Oman is conducive for investment	3.38	1.09	3.73	0.94	2.509	4	.643	Moderate	Minor
9. Tax exemptions are enough	2.93	0.93	3.18	1.10	4.391	4	.356	Moderate	Moderate
10. Lack of support from the government	3.06	1.12	2.50	1.06	6.934	4	.139	Moderate	Minor
11. Problems related to clearance (e.g., ports)	3.13	1.41	3.14	1.13	7.149	4	.128	Moderate	Mild
12. The health inspection requirements by different authorities are reasonable to comply with	3.06	1.24	3.27	1.20	4.010	4	.405	Moderate	Moderate
13. Lack of skilled workers	3.63	1.15	3.50	0.91	2.539	3	.468	Major	Major

[a]significant at 0.05 level
[b]significant at 0.01 level

Ennis (2015) informed of the tedious bureaucratic steps from business registration, to set up procedures, and access to finance. Al-Mataani (2017) supported Ennis. Omani entrepreneurs face challenges in the legal enforcements, bureaucracy, rigid regulations, inefficient labour market, immature entrepreneurship education, and support policies. Moreover, Al Belushi and Bagum (2017) confirmed the same findings. SMEs lack availability of credit; they are not getting long-term loans from the government or financial institutions and financial cost for SMEs is quite high in Oman which is a major hurdle in growth strategies. This is consistent with our findings, the medium firms rated the opportunities to get business loans (3.19) less than the large firms (3.55). The difficulty of obtaining finance from banks was also raised by several other studies (e.g. Al-Kharusi 2003; Khan and Almoharby 2007; Al-Shanfari et al. 2013). Al Barwani et al. (2014) perceived the conditional lending that requires the beneficiaries of the loans to buy certain equipment from pre-determined agents a notable challenge facing SME financing. They criticized this approach to prevent the beneficiaries of the loans to operate the business in a cost effective and flexible manner and they recommend giving the freedom to SMEs owners to choose suppliers and vendors, whether based in Oman or overseas, within the required standards.

We have found there are not only limited opportunities for the medium firms to get business loans, but they are also not happy with the interest rate of the business loans (2.81) compared to the large firms (3.36). This finding is consistent with Al-Kharusi

(2003), the SMEs owners in the manufacturing sector strongly agreed that high interest rate is the main difficulty in obtaining external finance.

Raw materials are important to the country's economy, growth, and competitiveness. The study revealed that the lack of raw materials is also more a challenge for the medium firms (3.75) than for the larger firms (2.82). It was found, in the demographic section, that more than 70% of raw materials are imported from other countries while only 30% of the materials are purchased locally. The European Commission (2017) ensures a sustainable supply of raw materials by having supply of raw materials from global markets in countries such as India and China and a supply of secondary raw materials through recycling. Maybe the Sultanate of Oman should follow a similar approach in providing the firms with enough raw material so they can boost their production and exports. The difficulties of obtaining raw materials adversely affect the production of the firms because it constitutes the basic ingredient of industry, thus there should be continuous supply to ensure ongoing and smooth production process. In order to support the supply of raw materials to industry, there is a need to include the raw materials sector in appropriate education and training programs in Oman. The education and training of skilled staff in mining engineering, geosciences and raw materials research is to be given high emphasize.

Results from this study also revealed that medium firms are less satisfied with tax exemption (2.93) than the larger firms (3.18). OECD (2010) noted that policies sometimes tend to favor large firms and discriminate again SMEs in effective tax rates and compliance standards. According to Ennis (2015) large business enterprises in Oman are impediments to new business entrants. Not only do these enterprises enjoy the protection of the government, but they often have rules work in their favor. This issue was also highlighted in the United States. Hathaway and Litan (2014) observed that larger business fared better than smaller ones, resulting in a decline in the number of start-ups. The same observation was made by Murphy (2015) in that US business might continue to decline if the growth of large corporations is left unchallenged.

It is interesting to note that despite all the barriers highlighted above, the business managers in this study do not want to blame the government. Both firm sizes do not perceive lack in the support given by the government (medium = 3.06 and large = 2.50). Although in previous studies, Al Belushi and Bagum (2017) found that lack of governmental support is creating a lot of challenges and issues for growth and expansion of SMEs in Oman.

Conclusion

This research investigated the internal and external obstacles faced by the medium and the large enterprises based on the view of 42 business managers from Rusayl industrial estate in Oman. The research has confirmed that there are numerous obstacles inhibiting the growth and development of the manufacturing sectors of medium enterprises in particular. The most significant internal obstacles are competitive pressure in the market, difficulty of external marketing, high labor cost and high operating cost. The most significant external obstacles are: lack of raw materials, lack of skilled workers, getting visas for foreign workers, and high interest rate of business loans. The large firms also share common barriers with medium firms such as the lack of skilled workers and difficulty of getting visas for foreign workers.

Therefore, there is a need for intervention from PEIE to develop an attractive and supportive environment for small, medium and large enterprises. PEIE administration needs to be more proactive in assessing the various challenges and obstacles and to take corrective actions that address these challenges and obstacles. For example, they need to improve the marketing of products, exhibitions, trade forums and organize platforms to showcase products. PEIE should encourage more networking and collaborative work between businesses of all sizes. Relationships between SMEs and larger businesses can be in the form of outsourcing, franchising, networking, and joint ventures. Such opportunities would help smaller firms to compete, grow and cooperate with larger firms, thus, enabling them to link with larger producers and break into local and international markets.

Regarding government intervention, the registration requirements and approval from various government organizations (such as Ministry of Commerce and Industry, Ministry of Manpower) should be streamlined to ease the time and effort needed to obtain the same. Rules on employing expatriate workforce should be supportive, to obtain required labor force. Colleges, Vocational Training Centers and Universities should benchmark their programs with the requirements of labor force in Industrial Estates. There should be productive engagement between higher education institutions and industries in order to identify potential and existing gaps in the labor market, involve in joint research projects, ensure curriculum relevance, and that students are equipped with the required practical skills.

Moreover, in order to encourage business investors, the government should simplify policies that encourage investment, simplify formalities for setting up business by enabling a single window registration to ease the time required, reduce bureaucracy, provide support to assist compliance with regulations, and increase government procurement from middle sized business. as Also, interventions are required to facilitate access to credit, subsidies and services to support SMEs; encourage businesses to use local manufacturing plants in their operations; provide marketing and financial support to SMEs to sustain and compete in the market.

To sum up, the government of Oman with the involvement of all concerned sectors need to create a business climate with reasonable levels of regulations; provide financial and marketing support, and produce skilled workforce.

Limitations of the study

The major limitations of this research result from the constraints in space and time, the methodological approach, and data access. This study has compared the medium and larger enterprises based on the number of employees only, it would be better to incorporate the revenue as well. To validate the findings from the questionnaires, it would be good to have interviews with some of the business manager-owners. As a result, data triangulation is missing from this research, which, if adopted, would allow the research to produce more valid and reliable results.

Future study is to examine which industry type face the most difficulty (e.g. is it chemicals; pharmaceutical; electrical and building materials; fiber optic cables; food stuff; textiles; garments; stationery; or paints). So precise solutions can be suggested to make Oman an industrial exporting country.

Abbreviations

GDP: Gross domestic product; IMF: International Monetary Fund; OECD: Organization for economics-operation and development; PEIE: Public Establishment for Industrial Estates; RIE: Rusayl Industrial Estate; SMEs: Small and medium enterprises

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Authors' contributions

All authors contributed to the work presented in this paper. Dr. AA-M initiated the conception and design of the work. Both Mr. MA-M and Mr. MA-Q managed the data collection and some parts of the data analysis and worked closely with Dr. AA-M in the finalization of the study. Dr. SK has contributed in the analysis and interpretation of data. All authors contributed in doing the literature review, editing and approving the final version of the paper for publication.

Competing interests

The authors declare that they have no competing interests.

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