

Owners'/Managers' Critical Success Factors in Industrial MSMEs: An Applied Study in 10th of Ramadan City Egypt.

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Abstract:

The purpose of this research is to identify the individual factors of owners/managers of industrial MSMEs that may be critical for business success using the own perception of the owners/managers themselves. The research focuses on industrial MSMEs in the 10th of Ramadan industrial city in Egypt. Quantitative data were collected by means of self-administered questionnaire from 335 industrial MSMEs. Descriptive and non-parametric statistics are applied using SPSS version 16.0. The findings reveal that previous experience and management skills of the owner/manager is the most important factor associated with business success, followed by the personality, the level of education, and entrepreneurial orientation of the owner/manager. While the age and gender of the owner/manager were not considered important for the success of industrial MSMEs. The

findings are of significant importance since being the first empirically driven research to study the success factors of industrial MSMEs in Egypt. Leaders of industrial MSMEs are advised to continuously develop their managerial skills, personality traits, and entrepreneurial orientation. It is recommended that financial institutions should consider these success factors while assessing financing opportunities for industrial MSMEs. Also, policy makers and financial institutions are encouraged to provide more training programs and affordable consultation services to owners/managers of industrial MSMEs.

Keywords

Critical Success Factors, Enterprise Factors, Entrepreneurial Factors, Business Environment Factors, Industrial MSMEs, Perceived Success.

ملخص البحث:

يهدف هذا البحث إلى تحديد العوامل الخاصة بملاك\مديري المنشآت الصناعية الصغيرة والمتوسطة ومتناهية الصغر اللازمة لنجاح الأعمال باستخدام وجهة نظر الملاك\المديرين أنفسهم. يركز البحث على المنشآت الصناعية الصغيرة والمتوسطة ومتناهية الصغر في مدينة العاشر من رمضان بمصر. تم تجميع بيانات كمية من 335 منشأة صناعية صغيرة ومتوسطة ومتناهية الصغر من خلال استبيان ذاتي. تم إجراء إحصاءات وصفية ولا معلميه باستخدام برنامج SPSS الإصدار السادس عشر.

تشير النتائج إلى أن سابقة الخبرة والمهارات الإدارية لدى المالك\المدير هي أهم العوامل المرتبطة بنجاح الأعمال ، متبوعة بالسمات الشخصية ، المستوى التعليمي ، والتوجه الريادي للمالك\المدير . وتعتبر النتائج ذات أهمية قصوى حيث أن هذا أول

بحث مبني على نتائج تجريبية لدراسة عوامل نجاح المنشآت الصناعية الصغيرة والمتوسطة ومتناهية الصغر في مصر .

ينصح قادة المنشآت الصناعية الصغيرة والمتوسطة ومتناهية الصغر على مداومة تطوير مهاراتهم الإدارية ، وسماتهم الشخصية ، وتوجههم الريادي . كما يوصى ان تأخذ مؤسسات التمويل تلك عوامل النجاح في الاعتبار عند تقييم الفرص التمويلية الموجهة للمنشآت الصناعية الصغيرة والمتوسطة ومتناهية الصغر . كما يقترح على صانعي السياسات والمؤسسات التمويلية ان توفر المزيد من برامج التدريب والخدمات الاستشارية بأسعار معقولة لأصحاب/ مديري المنشآت الصناعية الصغيرة والمتوسطة ومتناهية الصغر.

الكلمات المفتاحية :

عوامل النجاح الحاسمة ، العوامل الريادية ، عوامل بيئة العمل ، المنشآت الصناعية الصغيرة والمتوسطة ومتناهية الصغر ، النجاح المنظور .

1. Introduction:

An increased attention of policy makers towards encouraging Micro, Small and Medium Enterprises (MSMEs) is lately noted (Okoli et al., 2020), this is argued to enhance economic growth (Hamad et al., 2018), and sustainability (Al-Tit and Euchi, 2019). MSMEs are a major tool for fighting unemployment and poverty through generating new job opportunities (Lampadarios, 2015). It is also considered a major contributor in achieving income distribution, rapid industrialization, export growth (Mamo, 2020), as well as developing innovation and entrepreneurship within a country (Bary, 2019).

In Egypt, 99% of total private enterprises are MSMEs employing more than 75% of the total workforce (Ayadi et al., 2017; Elsaid et al., 2014; Ghanem, 2013), and around 51% of these MSMEs are in manufacturing sector (Ayadi et al., 2017; Elsaid et al., 2014), with the majority of manufacturing enterprises being located in 10th of Ramadan City (Bary, 2019).

Elsaid et al. (2014) further reveal that 60% of SMEs in Egypt are sole proprietorship, and since they are generally limited in internal resources, so the owners usually perform the management duties by themselves (Millers and Gaile, 2021). Despite its importance, only few research papers have attempted to study industrial MSMEs in Egypt. This research aims to investigate the individual factors of the owners/managers that are perceived to be critical for the success of industrial MSMEs in Egypt. The research builds on the own perceptions of the owners and managers of industrial MSMEs in 10th of Ramadan City. As claimed by Lampadarios (2015), collecting the data from senior managers and owners of SMEs is very valuable since those high-level managers are expected to have necessary experience and market knowledge to correctly determine critical success factors for their businesses.

2. Pilot Study:

In order to validate the existence of this current research problem, unstructured interviews were conducted with owners of 5 industrial MSMEs operating in 10th of Ramadan Industrial city Egypt. The interview aimed to examine whether pre-determination of critical factors of success can help owners/managers increase their chances of success or not. The results revealed that pre-recognition of possible factors of success can lead owners/managers to focus on these factors and, hence, may increase their level of success. Some interviewees further highlighted the importance of recognizing these factors in the context of their specific industry since factors which might be critical for a cluster of businesses might not be critical for other clusters of businesses.

3. Previous Studies:

Seeking to identify critical success factors for MSMEs has been the focus of multiple previous studies. For example, Lampadarios (2015) aimed to identify the critical success factors for MSMEs in UK chemical distribution industry. He concluded that, out of the 21 initially proposed factors, only 9 factors were found to be critical. Similarly, Benzing and Chu (2012) studied the success factors of MSMEs in Kenya, Ghana, and Nigeria. The results of their study revealed significant differences in the appreciation of the importance of the factors between the 3 countries, which

confirms that one factor could be important for a cluster of business while being not for others.

Another study investigated the success factors of MSMEs in furniture industry in Malaysia, which reported a significant difference between Chinese and Malay ethnic respondents in the appreciation of success factors (Ratnasingam et al., 2021). This has led to identify some factors that could justify the excellence of Chinese ethnic managers over Malay ethnic managers in the furniture industry in Malaysia.

Sefiani (2013) conducted a study to identify critical success factors for industrial MSMEs in Tangier city in Morocco. He investigated the difference of perception of factors between successful and less-successful respondents, claiming that a higher perception of a specific factor by successful respondents against that of less-successful respondents indicates that this specific factor is associated to the success. Similar hypotheses were claimed by Lobos and Wojciech (2021) in their attempt to identify the differences in appreciation of managerial practices between successful and less-successful respondents.

Such studies support the importance of identifying critical factors of success. And up to the researcher's knowledge, no previous research has attempted to uncover the factors of MSMEs' managers that are critical for the success of industrial MSMEs in Egypt.

4. Research Questions:

Based on the pilot study results and the previous research analysis, this research aims to answer the following questions:

- 1- What are the personal factors of MSMEs' owners/managers that are critical for the success of industrial MSMEs in 10th of Ramanda city Egypt ?
- 2- Are there differences between the owners/managers of successful and less-successful enterprises in perceiving the importance of any of these factors ?

5. Research Objectives:

Therefore, the objectives of this study are to:

- 1- Identify the most important individual factors discussed in literature.
- 2- Determine a measure for the importance of each of the identified factors.
- 3- Determine a measure to differentiate between successful and less-successful enterprises.
- 4- Define and recognize industrial MSMEs operating in 10th of Ramadan Industrial City Egypt.
- 5- Identify the importance of each success factor from the context of industrial MSMEs in 10th of Ramadan city.
- 6- Evaluate and report significant differences in perceiving the importance of each factor between the owners/managers of successful versus less-successful enterprises.

6. Industrial MSMEs in Egypt

The term “Small” and “Medium” refers to the size of the business regardless of its sector (El Naggar & EL Naggar, 2021). In 2020, the Egyptian Law 152 for the year 2020 was enacted to identify Micro, Small and Medium Sized Enterprises (MSMEs) and it differentiates already established enterprises according to their annual revenues while newly established enterprises according to their paid-up capital (Egypt Government Official Gazette, 2020). Table 1 illustrates the latest criteria approved under Law 152 for the year 2020.

Table 1 – MSMEs Classification According to Law 152 for year 2020

Type	Established within 2 years	Established since more than 2 years
Micro	Paid-up or Invested Capital: Up to 0.05 million EGP	Revenue: Up to 1 million EGP
Small	Paid-up or Invested Capital: Up to 5 million for industrial, and 3 million for others	Revenue: Up to 50 million EGP
Medium	Paid-up or Invested Capital: Up to 15 million for industrial, and 5 million for others	Revenue: Up to 200 million EGP

Source: Self Elaborated based on Egypt Government Official Gazette (2020)

The term “Industrial enterprise” was defined under the Egyptian law 95 of the year 2018 as: any enterprise, company, or workshop, however its size, that performs physical or chemical transformation of raw materials, or performs transformation processes on any product, including assembling, packing, sorting, recycling, or any further processes that could be named by the

minister in charge as industrial operations (Egypt Government Official Gazette, 2018).

Micro and small enterprises represent almost 99% of total private enterprises and employ more than 75% of total employment in Egypt (Ayadi et al., 2017; Ghanem, 2013). In 2014, Elsaid et al. (2014) estimated that a total of 2.5 million MSMEs operating in Egypt, and around 40% of these MSMEs are concentrated in 3 governorates; Sharqia followed by Cairo then Gharbia.

A study published by the Euro-Mediterranean Network of Economic Studies (EMNES) concluded in 2017 reveals that around 51% of MSMEs operating in Egypt are in manufacturing sector (Ayadi et al., 2017), this is in line with the results concluded by Elsaid et al., (2014).

In 2019, another analysis was conducted by Bary (2019) on the 4 biggest industrial cities in Egypt, the study surveyed 1600 industrial enterprises, and revealed that only 12% of the whole sample were reported as manufacturers, while others are in different fields such as business services, construction, and retail. The analysis also indicated that MSMEs represent 95 to 98% of the reported industrial enterprises and 10th of Ramadan City includes almost 39% of the enterprises within the 4 surveyed industrial cities.

The 2017/2018 Economic Census issued by the Central Agency for Public Mobilization and Statistics (2020) reported that MSMEs accounts to 98% of the total number of private

enterprises operating in Egypt, which is quite in-line with previous studies, 94% of the total MSMEs is micro sized enterprises while the 6% SMEs contribute with more than 55% of production value of the whole MSMEs sector. The census also points out that around 45% of medium enterprises are in the manufacturing field, compared to 26% of small enterprises, and only 13% of micro enterprises.

It is also noted that the share of manufacturing in total private sector employment declined from 18% in 1998 to 14% in 2018 (Amer & Selwaness, 2021). Another study of Mokhtar and Abdelwahab (2014) as cited by Ayadi et al. (2017) reveals that, even though MSMEs represent 99% of enterprises operating in Egypt, the contribution of MSMEs in manufacturing sector accounts to only 13% of total production and 47% of total employment of the sector. Alarming for a rapid deindustrialization that requires further attention (Amer & Selwaness, 2021).

7. Literature review and Hypotheses development

For every group of SMEs, there are only some specific factors that are critical to their success and should be the focal point for the managers of these SMEs (Alfoqahaa, 2018; Félix & Santos, 2018). Simpson et al. (2011) defined Critical Success Factors for SMEs as those factors that an SME should have or activities that should do to maintain or enhance its performance. These factors can either be internal controllable or external uncontrollable

(Lobos & Wojciech, 2021; Li, 2019; Li and Eriksson, 2012; Sefiani, 2013). Internal factors can further be classified into Firm related and Entrepreneur related (Nikolić et al., 2015; Sefiani, 2013), where entrepreneur related factors are the traits, characteristics and skills of the owner/manager of an SME that can increase the chances of his business success (Tell & Andersson, 2009).

A wide range of entrepreneur related factors was covered in literatures, this may include owner's/manager's age, and gender (Lampadarios, 2015; Lampadarios, 2016; Li & Eriksson, 2012; Sefiani, 2013), personality traits and leadership capabilities (Samadzad & Hashemi, 2022; Lampadarios, 2015; Okoli et al., 2020; Li, 2019; Li and Eriksson, 2012), entrepreneurial orientation (Lampadarios, 2015; Okoli et al., 2020; Rodrigues et al., 2021), management skills and experiences (Samadzad & Hashemi, 2022; Lampadarios, 2015; Lampadarios, 2016; Li and Eriksson, 2012; Benzing & Chu, 2012; Sefiani, 2013), level of education (Samadzad & Hashemi, 2022; Lampadarios, 2015; Li & Eriksson, 2012; Sefiani, 2013; Benzing et al., 2009), family support and self-employment background (Li, 2019; Benzing & Chu, 2012; Benzing et al., 2009), internal or external locus of control (Samadzad & Hashemi, 2022; Sefiani, 2013), propensity of risk taking (Sefiani, 2013), innovation (Li, 2019), and his/her reputation for honesty and ethics (Benzing & Chu, 2012; Benzing et al., 2009; Dzomonda & Fatoki, 2017).

Table 2 – MSMEs' Entrepreneur Related Factors of Success:

1. Age	4. Personality
2. Gender	5. Work Experience & Management Skills
3. Level of Education	6. Entrepreneurial Orientation

Source: (Lampadarios et al., 2017).

Even though MSMEs' success factors were studied in many previous research, it is unsuitable to standardize a set of factors since many cultural, political, economic, and other business environment differences influence the appreciation of these factors (Benzing & Chu, 2012; Li, 2019), accordingly, this research undertakes the 6 entrepreneur related factors proposed by Lampadarios et al. (2017) and illustrated in table 2 as its main factors of study.

7.1.Age

Younger people are cognitively sharper, more innovative, and less distracted by responsibilities (Azoulay et al., 2018), that is why Zali et al. (2018) argued that the more people get older the more they lose entrepreneurial competencies. But, on the other hand, experiences are accumulated, and mental maturity is gained as people get older (Bai et al., 2022).

In fact, older entrepreneurs are more likely to have greater knowledge, broader network, and financial stability (Azoulay et al., 2018). Lampadarios (2015) claims that enterprises managed by older individuals are more likely to survive compared to those managed by young individuals, while younger individuals are

more likely open for re-establishing another business after experiencing a business failure (Vidayana et al., 2020).

A study by Zhao et al. (2021) in China reveals that the age has a U-shaped relation with success, meaning that elder entrepreneurs are more likely to succeed than middle aged. The study also argues that younger ages are more linked to growth, while elder ages are more linked to financial results. Accordingly, it is obvious that the owner/manager age with all the pros and cons of younger versus older ages could be fundamental for success, and, therefore, it could be perceived as an important factor of success. Consequently, the following hypothesis is assumed:

H-1 : The perceived importance of owner's/manager's age is associated with the success of industrial MSMEs in 10th of Ramdan City Egypt.

7.2. Gender

Even though the majority of businesses are established by men, women's contribution in the business environment has changed dramatically in the last few years, specially within small and medium businesses (Majláth Et al., 2019). Men are higher risk-takers and more exposed to business environment so tend to acquire experiences faster than women. Male entrepreneurs are more concerned with business expansion and internationalization, while female entrepreneurs usually seek business stability (Majláth Et al., 2019). Accordingly, men entrepreneurs tend to start their

entrepreneurial career in early 30th while women tend to do so in the middle to late 30th (Hisrich et al., 2017).

Sabarwal and Terrell (2008) argues that the measure of performance and factors of evaluation used could be the reason why the performance of female entrepreneurs is perceived to be lower than that of males in literature. Another possible reason is that the contribution of female entrepreneurs in some industries is limited due to cultural, environmental and other business characteristics. For example, gender-related factors such as cultural, childcare responsibilities, and types of tasks performed should be considered (Shava & Rungani, 2016).

Even though several studies reported the low importance of gender of owner/manager for enterprise success (Indarti & Langenberg, 2004; Kalita, 2018; Ratnasingam et al., 2021; Sefiani, 2013), it could still be perceived as an important factor of success by owners/managers of industrial MSMEs in 10th of Ramadan city given the eastern culture that may lead to dual-burden, and different motives between female and male entrepreneurs. Therefore, the following hypothesis is assumed:

H-2 : The perceived importance of owner's/manager's gender is associated with the success of industrial MSMEs in 10th of Ramdan City Egypt.

7.3.Level of Education

Even though there are many examples of successful entrepreneurs who have decided to leave their study and focus on

growing their businesses (Hisrich et al., 2017; Dumitrasciuc, 2019), entrepreneurs reported that an education level in the fields of finance, management, marketing, communication and strategic planning has a great importance for starting a business (Hisrich et al., 2017). Also, Sefiani (2013) advocates that some specialized education such as engineering, computer science and biochemistry is very useful for entrepreneurs operating in a relevant field. In fact, many recent studies encourage governments to invest in special Entrepreneurship Education (Cho & Lee, 2018; Raposo & Paço, 2011; Kanaan et al., 2022; Shen et al., 2021).

Education is claimed to increase individuals' self-confidence and independence. It increases the cognitive ability for recognizing different opportunities (Raposo & Paço, 2011). Even basic education establishes the foundation to acquire more knowledge and problem-solving skills (Hisrich et al., 2017). Lussier and Pfeifer (2001) claim that people with no college education are more vulnerable to fail in establishing new businesses. This is supported by the outputs of the latest Global Entrepreneurship Monitor report (GEM, 2023) which reports that new entrepreneurial activities initiated by graduated entrepreneurs much exceeds that of non-graduated entrepreneurs in 45 countries.

But there are still many studies that failed to proof that education level is important for SME's success (Douglas et al., 2017; Kalita, 2018; Lampadarios, 2015; Li and Eriksson, 2012;

Ratnasingam et al., 2021) making the Owner's/Manager's level of education as an uncertain factor for MSMEs' success and therefore requires further investigation. Accordingly, the following hypothesis is assumed:

H-3 : The perceived importance of owner's/manager's level of education is associated with the success of industrial MSMEs in 10th of Ramdan City Egypt.

7.4. Personality

According to Ezekel et al. (2018), behaviors, abilities, beliefs, and skills are unique for each individual. Such unique behavioral patterns, that are developed over time, shape an individual's personality (Akinboye & Asimiran, 2016). Hence, personality is the combination of constant physical and mental features of an individual, it is the individual's unique mix of motivations, abilities, thoughts, desires and believes (Golpayegan, 2017).

Previous studies argues that entrepreneurs' personality is unique (Kritikos, 2022; Beugelsdijk & Noorderhaven, 2005; Akinboye & Asimiran, 2016; Lampadarios, 2015; Singh & Rahman, 2013; Pattanayak & Kakati, 2023), they are claimed to be more open for risk, more optimistic, more extraverted, and more competitive (Kritikos, 2022; Akinboye & Asimiran, 2016), they are also more oriented, responsible, and open to exert more efforts (Beugelsdijk & Noorderhaven, 2005; Singh & Rahman, 2013; Pattanayak & Kakati, 2023).

In fact, the personality of the owners/managers of SMEs was perceived as an important factor of success by many studies (Abera, 2021; Benzing & Chu, 2012; Douglas et al., 2017; Gok et al., 2021; Krasniqi & Tullumi, 2013; Kalita, 2018), and, accordingly, it could be perceived critical for the success of Industrial MSMEs' in 10th of Ramdan City. Consequently, the following hypothesis is assumed:

H-4 : The perceived importance of owner's/manager's personality is associated with the success of industrial MSMEs in 10th of Ramdan City Egypt.

7.5. Work Experience and Management Skills

Experience is the accumulated knowledge and skills gained by an individual while performing tasks or dealing with problems (Woszczyna, 2014). Prior work experience can reduce uncertainty while increasing self-confidence (Othman et al., 2016). It also enhances business understanding and awareness (Pellissier & Nenzhelele, 2013; Hisrich et al., 2017).

Management skills are equally important to business experience (Lampadarios, 2015). Without management skills, entrepreneurs won't be able to lead people to achieve their business objectives (Kritikos, 2022; Li and Eriksson, 2012). The importance of management skills even increases as business grows (Hisrich et al., 2017), and the primary source of learning to lead is through work experience (Dike et al., 2015; Serrat, 2019).

People usually follow causal thinking process, where they start with a desired outcome then think about possible means to achieve this outcome; on the contrary, entrepreneurs follow effectuation thinking process; they start by reviewing their resources, experiences, networks, then think about possible outcomes that could be achieved using what they have (Hisrich et al., 2017). In other words, an entrepreneur's work experience and management skills are his/her asset.

The owner/manager work experience and management skills was reported as important for SMEs success in several previous studies (Abera, 2021; Benzing and Chu, 2012; Chowdhury et al., 2013; Chu et al., 2011; Krasniqi & Tullumi, 2013; Kalita, 2018), while some other studies failed to register its importance (Balasa & Alemu, 2022; Benzing et al., 2009; Douglas et al., 2017; Indarti & Langenberg, 2004), hence, how important it could be perceived for the success of industrial MSMEs in 10th of Ramadan City is appreciated. And therefore, the following hypothesis is assumed:

H-5 : The perceived importance of owner's/manager's work experience and management skills is associated with the success of industrial MSMEs in 10th of Ramdan City Egypt.

7.6. Entrepreneurial Orientation

Entrepreneurial Orientation (EO) is the set of behavioral actions that seek new market opportunities through proactive decision making, risk-taking, innovative practices, competitive aggressiveness, and

autonomy (Akpoviro & Akanmu, 2021; George, 2011; Pearce et al., 2010; Solikahan & Mohammad, 2019).

Even though it was introduced for organizational level, entrepreneurial orientation was studied at individual level as well (Cho & Lee, 2018) and even suggested for establishing competitive advantage (Akpoviro & Akanmu, 2021) since it encourages competitiveness and entry into new markets (Pearce et al., 2010), it also supports developing new products, and can boost financial and non-financial performances, as well as achieving high social performance (Cho & Lee, 2018).

EO was reported as a crucial factor for business success in many research (Kalita, 2018; Lampadarios, 2015; Rodrigues et al., 2021; Ratnasingam et al., 2021; Sefiani, 2013). Hence, it is concluded that the five or even the three basic elements of Entrepreneurial Orientation are very important for business success, especially in today's highly competitive and rapidly changing environment, therefore, it is very important to consider EO as a prospect factor for 10th of Ramadan Industrial MSMEs' success. Consequently, the following hypothesis is assumed:

H-6 : The perceived importance of Owner's/manager's entrepreneurial orientation is associated with the success of industrial MSMEs in 10th of Ramdan City Egypt.

8. Research Methodology.

8.1. Adopted Philosophy, Approach and Strategy

The researcher considers the knowledge to be socially embedded through the personal experiences of owners and managers of MSMEs but still shared among the selected cluster of business, and therefore pragmatism philosophy is adopted (Kaushik & Walsh, 2019; Sekaran & Bougie, 2016).

Given the descriptive and explanatory nature of this research, and the aim to generalize the findings for the selected population, a quantitative, deductive approach employing a survey strategy is applied (Saunders et al., 2012; Sekaran & Bougie, 2016). The data collection is performed through a cross-sectional questionnaire that is distributed and collected at once during a specific time frame.

8.2. Questionnaire Structure

The questionnaire is composed of three parts: The first part is a category scale to identify the demographics of the respondents. The second part adopted from Lampadarios (2015) and surveys the perceived importance of the success factors. According to Lampadarios (2015), the personal perceptions of the owners/managers of MSMEs is the best practice to identify the importance of factors for their business success. This part consists of 6 questions utilizing 5-point Lickert scale ranging from 1-(very unimportant) to 5-(very important).

The third part is adopted from Alfoqahaa (2018) and measures how the owners/managers perceive their business success. It is more reliable to measure success as perceived by the owners and managers of the SMEs since the majority of SMEs doesn't not keep proper accounting records (Alfoqahaa, 2018; Chittithaworn et al., 2011; Chowdhury et al., 2013; Li, 2019; Perez & Canino, 2009; Radzi et al. 2017; Sefiani, 2013). This part is composed of 5 questions with a 5-point Likert scale ranging from 1-(Strongly disagree) to 5-(Strongly agree). Computed Cronbach's alpha is 0.853.

8.3.Data Analysis Techniques

SPSS (Version 16.0) is used to analyze the data and test this current research hypotheses. Descriptive statistics are employed to describe the structure and demographics of respondents and to assess the importance rank of each factor using the perceived mean value (Balasa & Alemu, 2022; Benzing & Chu, 2012; Gok et al., 2021; Lampadarios, 2015; Sefiani, 2013).

Following the approach of Sefiani (2013), respondents were grouped into two groups: successful and less-successful, where respondents who have rated their perceived business success with a mean value of 4 or above were considered as successful, while respondents who have rated their perceived business success with a mean value below 4 was considered as less-successful. Non-parametric Mann-Whitney U-test and mean rank is then used to examine significant differences between successful and less-successful groups in their perceived importance of each factor. Factors which are found to be

significantly appreciated by successful respondents than less-successful respondents are considered to be associated with the success of industrial MSMEs.

8.4. Population and Sampling

8.4.1. Population

The population of this research is all industrial MSMEs operating in 10th of Ramadan City Egypt. A list of 2578 industrial MSMEs was recognized through addressing the Egyptian Industrial Development Authority (IDA), as being the official entity in charge according to the law 95 of the year 2018 (Egypt Government Official Gazette, 2018). This list represents the population size for this research.

8.4.2. Unit of Analysis

The unit of analysis is industrial MSMEs operating in 10th of Ramadan City Egypt. Each industrial MSME is represented by either an owner or a manager for the purpose of answering the questionnaire.

8.4.3. Sampling technique and Sample Size

Probability simple random sampling technique was employed for maximum generalizability of outcomes (Saunders et al., 2012; Sekaran & Bougie, 2016). According to Krejcie and Morgan (1970), at a 95% confidence level, a total of 335 complete and valid responses should represent a convenient sample size.

8.5.Data Collection Process

An electronic form of the questionnaire was created on Google Forms. A list with phone numbers of owners/managers, as well as addresses of industrial MSMEs in 10th of Ramdan city was acquired from the IDA. The questionnaire was self-administered through phone calls and direct visits. In parallel data evaluation, filtration and preparation were conducted till achieving a total of 335 complete and valid responses. The data were collected at once during November and December 2023.

9. Research Findings

9.1.Characteristics of respondents

Table 3 demonstrates the personal characteristics of respondents.

Table 3 – Characteristics of respondents: Personal characteristics

GENDER					
CATEGORY	MALE		FEMALE		TOTAL
FREQUENCY	320		15		335
PERCENTAGE	95.5		4.5		100
AGE					
CATEGORY	LESS THAN 35	FROM 35 TO 45	OVER 45 TO 60	OVER 60	TOTAL
FREQUENCY	28	195	96	16	335
PERCENTAGE	8.4	58.2	28.6	4.8	100
YEARS OF EXPERIENCE					
CATEGORY	LESS THAN 5	FROM 5 TO 10	OVER 10 TO 20	OVER 20	TOTAL
FREQUENCY	22	149	102	62	335
PERCENTAGE	6.6	44.5	30.4	18.5	100
ROLE					
CATEGORY	OWNER/PARTNER		MANAGER		TOTAL
FREQUENCY	135		200		335
PERCENTAGE	40.3		59.7		100

Source: Elaborated by author.

The majority of respondents are males (95.5%) which is in compliance with the figures reported by Ismail et al. (2019) that more than 80% of entrepreneurship activities in Egypt are managed by men and further supported by Rizk and Rashed (2019) claiming that manufacturing enterprises owned by females are much fewer than that owned by males. The age distribution shows more than 90% to be over 35 years old, and almost 94% of respondents have more than 5 years of experience in their current business field. These are logical figures since the research aimed to survey only owners and managers of industrial MSMEs.

The reported characteristics of the enterprises are demonstrated in table 4. The results show that most of the businesses have been operating for more than 2 years, and more than 60% employ 10 to 49 employees. According to the annual turnover, 21% are micro, 65% are small, and 13% are medium-sized enterprises. Out of the received 335 responses; 148 respondents reported their perceived business success as successful, while 187 reported their perceived business success as less-successful.

Table 4 – Characteristics of respondents: Characteristics of enterprises

COMPANY AGE					
CATEGORY	LESS THAN 2 YEARS	FROM 2 TO 10 YEARS	MORE THAN 10 YEARS		TOTAL
FREQUENCY	17	188	130		335
PERCENTAGE	5.1	56.1	38.8		100
FIELD					
CATEGORY	CHEMICAL	ENGINEERING	TEXTILE & LEATHER	FOOD PROCESS	TOTAL
FREQUENCY	50	149	108	28	335
PERCENTAGE	14.9	44.5	32.2	8.4	100
NUMBER OF EMPLOYEES					
CATEGORY	LESS THAN 10	FROM 10 TO 49	FROM 50 TO 200	MORE THAN 200	TOTAL
FREQUENCY	31	211	68	25	335
PERCENTAGE	9.2	63	20.3	7.5	100
ANNUAL TURNOVER (In million EGP)					
CATEGORY	LESS THAN 1	FROM 1 TO 50	ABOVE 50 TO 200	ABOVE 200	TOTAL
FREQUENCY	71	220	44	0	335
PERCENTAGE	21.2	65.7	13.1	0	100
PERCEIVED SUCCESS					
CATEGORY	SUCCESSFUL		LESS-SUCCESSFUL		TOTAL
FREQUENCY	148		187		335
PERCENTAGE	44.2		55.8		100

Source: Elaborated by author.

9.2.Success Factors

Table 5 illustrates the mean values of the perceived importance of each factor for successful and less-successful groups. Also, the combined mean value of the whole sample is illustrated under the column “Total Mean”. The non-parametric mean rank of Mann-Whitney is also displayed. The results show that the experience and management skills of the owner/manager is the most important factor of success as perceived by the owners and managers of industrial MSMEs in 10th of Ramadan City Egypt. This is followed by the personality, then the level of education,

and the entrepreneurial orientation of the owner/manager. The findings reveal that neither the age nor the gender of the owner/manager were seen to be important for the success of industrial MSMEs in 10th of Ramadan City.

Table 5 – Mean value of perceived importance:

PERCEIVED SUCCESS		Total Mean	Mean	Mean Rank of Mann-Whitney	Std. Deviation	Std. Error Mean
AGE	LESS SUCC	2.84	2.95	176.23	1.042	.086
	SUCCESSFUL		2.75	161.49	1.237	.090
GEN	LESS SUCC	2.46	2.59	180.04	1.099	.090
	SUCCESSFUL		2.36	158.47	1.189	.087
EDU	LESS SUCC	4.36	4.16	144.24	.863	.071
	SUCCESSFUL		4.51	186.80	.721	.053
PERSON	LESS SUCC	4.61	4.45	152.18	.843	.069
	SUCCESSFUL		4.73	180.52	.511	.037
EXP&MNG	LESS SUCC	4.63	4.45	143.52	.693	.057
	SUCCESSFUL		4.78	187.37	.455	.033
EO	LESS SUCC	4.21	4.09	150.60	.728	.060
	SUCCESSFUL		4.32	181.77	.735	.054

Source: Elaborated by author. (Total N = 335. N_{Successful} = 187. N_{Less-successful} = 148)

To further support these findings, Mann-Whitney U test was applied to assess the significant differences in perceptions between successful and less-successful groups of enterprises. The results are reported in table 6. The results of Mann-Whitney U test show highly significant differences between successful and less-successful groups in perceiving the importance of the following 4 factors: level of education, personality, experience,

management skills, and entrepreneurial orientation of the owner/manager, while moderately significant difference in perceiving the importance of gender, and no significant difference in the perceived importance of the Age of the owner/manager between the two groups.

Table 6 – Mann-Whitney U test between successful & less-successful groups:

	AGE	GEN	EDU	PERSON	EXP & MNG	EO
Mann-Whitney U	1.262E4	1.206E4	1.032E4	11496.000	10215.500	1.126E4
Wilcoxon W	3.020E4	2.963E4	2.135E4	22522.000	21241.500	2.229E4
Z	-1.435	-2.107	-4.433	-3.293	-5.048	-3.261
Asymp. Sig. (2-tailed)	.151	.035*	.000*	.001*	.000*	.001*

a. Grouping Variable: ROUND PERSUCC. (*) Indicates significant difference.

Source: Elaborated by author.

Another interesting finding, reported in table 5, which further explains the results of Mann Whitney test is that successful respondents have reported higher mean rank values, with lower standard deviations, for the four factors: level of education, personality, experience and management skills, and entrepreneurial orientation of the owner/manager than that reported by the less-successful respondents. While on the contrary, lower mean rank values, with higher standard deviations, were reported by the successful respondents for the other two factors: age and gender of the owner manager

compared to what is reported by the less-successful respondents. This indicates that, not only the four factors are seen to be important by the majority of respondents, but also; successful respondents have significantly considered these four factors to be more important than what have been considered by less-successful respondents. While, on the other hand, the remaining two factors: age and gender were considered to be less important by successful respondents than what have been considered by less-successful respondents. Therefore, the results of the research hypotheses can be concluded as summarized in table 7:

Table 7 – Summary of research hypotheses results:

Hypotheses	Result
H1: owner's/manager's age	Not supported
H2: owner's/manager's gender	Not supported
H3: owner's/manager's level of education	Supported
H4: owner's/manager's personality	Supported
H5: owner's/manager's experience and management skills	Supported
H4: owner's/manager's entrepreneurial orientation	Supported

Source: Elaborated by author

10. Research Findings Discussion

The owner's/manager's level of education, personality, experience and management skills, as well as entrepreneurial orientation were found to be associated with the success of industrial MSMEs in 10th of Ramadan city. Also, the owner's/manager's experience and management skills was perceived as the most salient factor, followed by the personality

of the owner/manager. Abera (2021) concluded similar results where individual's experience and personal characteristics were found to have significant relation with the success of SMEs in Ethiopia. Similar results were confirmed by Benzing and Chu (2012) on their study on SMEs in Ghana, Nigeria, and Kenya where the owners and managers of SMEs in the three countries ranked management skills and the charisma of the owner/manager to be of the most important factors for their success. Also, the study of Kalita (2018) on educational SMEs in Estonia concluded that both Estonian and Russian speaking respondents reported the importance of the personality, experience and management skills of the owner/manager for their success. Furthermore, management skills and leadership of the owner/manager was reported to be critical for business success of Iranian SMEs (Samadzad and Hashemi, 2022). The results of Benzing et al. (2009) as well as Douglas et al. (2017) also supported these findings.

These findings and consistency with other previous research are justifiable since MSMEs are normally characterized to be of flat organizational structure, where owners/managers are directly involved in daily tasks and operations. Such involvement requires good personality traits and management skills to lead and facilitate daily activities. Also, MSMEs usually don't have the ability to employ experienced employees, therefore, the personal experience of the owner/manager is critical for their success.

The level of education of the owner/manager was also perceived to be associated with the success of industrial MSMEs in 10th of Ramadan city, this is in line with the results of Chowdhury et al. (2013), Indarti and Langenberg (2004), and Sefiani (2013) in other regions. However, few other results such as that of Lampadarios (2015) on UK chemical distribution industry failed to link level of education with the success of SMEs. Also, the owners and managers of SMEs in furniture industry in Malaysia didn't report level of education to be of critical importance for their business success (Ratnasingam et al., 2021). Such inconsistencies may be influenced by other business-related factors. For example, the study of Lampadarios (2015) reported that more than 87% of respondents are holding a bachelor's degree or a higher level of education, which indicates that education level is a preset requirement for his studied population (UK chemical distribution industry), and therefore it is not considered as a critical factor of differentiation. On the other hand, the study of Ratnasingam et al. (2021) argues that very few graduates of wood related studies in Malaysia seek employment in the wood related industry, which indicates that the industry itself doesn't require a high level of education.

The fourth supported factor is the owner's/manager's entrepreneurial orientation. In fact, the findings of Kalita (2018), Lampadarios (2021), Rodrigues et al. (2021), and Sefiani (2013) supported that the entrepreneurial orientation of the

owner/manager to be important for SMEs' success. The findings of Ratnasingam et al. (2021) concluded that Chinese ethnic owners have reported entrepreneurial orientation to be important for their business success, while Malay ethnic owners didn't consider it to be of importance to their success. In fact, without an entrepreneurially orientated owner/manager, MSMEs would encounter difficulties in innovating new products or expanding into new markets. Such justification was also reported by Ratnasingam et al. (2021) where they considered the difference in perceiving the importance of EO between Chinese and Malay ethnic owners/managers as a major reflection for the higher competitiveness and openness for expansion shown by Chinese ethnic owners against that of Malay ethnic owners.

The results also indicates that neither the age nor the gender of the owner/manager is important for the success of industrial MSMEs in 10th of Ramadan city. The results are consistent with the findings of several previous research (Indarti & Langenberg, 2004; Kalita, 2018; Lampadarios, 2015; Ratnasingam et al., 2021). In fact, early-stage entrepreneurial activities are led by young age individuals in Egypt (Ismail et al., 2019). It is very common, especially in industrial MSMEs, that an owner/manager starts a business at very young age as being an experienced technician or join an already established family business just after graduation or even during his/her study. Therefore, it is common to find young owners/managers with necessary

experience and knowledge. This could be a reason why age was not considered critical for the success of industrial MSMEs in 10th of Ramadan City.

With regards to the gender, the populations studied by Indarti and Langenberg (2004), Kalita (2018), and Lampadarios (2015) are not industrial MSMEs, while it is very uncommon to find a female owner of an industrial MSME in Egypt, the majority of respondents are males. Similar results were reported by Ratnasingam et al. (2021) while almost all respondents were males. Self-reported measures might have led to biased responses in this case.

11.Implications and Recommendations

Up to the author's knowledge, this research is the first to study individual factors of success of the owners and managers of industrial MSMEs in Egypt. The implications of the findings are of great importance for: business leaders of industrial MSMEs, financial institutions, policy makers, as well as future researchers.

Owners/managers of industrial MSMEs in 10th of Ramadan City are now aware of possible individual factors which may influence their business success. More aggressiveness, innovativeness, risk-taking, and proactive decisions to develop new products and encounter new markets are key drivers for business success. Continuous training to keep developing their social and managerial skills as well as their entrepreneurial orientation is critical for success. Furthermore, business owners/managers shall always question their experience

suitability when assessing potential business opportunities. Financial institutions shall also consider the identified critical success factors while assessing financing opportunities for industrial MSMEs in 10th of Ramadan City Egypt. They are advised to provide training and professional consultation services to their clients, which may raise their success rates. Government and policy makers are advised to make available better entrepreneurship education programs and encourage business leaders to join it. Also, policy makers are encouraged to make affordable consultations services for owners/managers of industrial MSMEs. Finally, the outcomes of this research can formulate the base foundation for future researchers whom might be interested in studying critical success factors for industrial MSMEs.

12.Conclusion

Extensive literature review of critical success factors for MSMEs has led to the suggestion of 6 individual related factors that could influence the success of industrial MSMEs in 10th of Ramadan city Egypt. A survey strategy was adopted, and responses were collected from 335 owners and managers of industrial MSMEs in 10th of Ramadan city. Descriptive and non-parametric statistical total techniques were applied, and the results showed that only 4 factors were important and associated with the success of industrial MSMEs in 10th of Ramadan City.

The findings suggest that work experience and the level of education of the owner/manager should be considered when

evaluating new business opportunities. Also, continuous development of management skills, personality traits and entrepreneurial orientation shall be the focal point for current and future owners/managers to better-up success rates of industrial MSMEs in 10th of Ramadan City Egypt. The findings also highlight important recommendations that should be considered by financial institutions and policy makers to enhance the performance of industrial MSMEs in Egypt.

13.Limitations

The limitations of this current research are in its focus on a single region, 10th of Ramadan city. Also, the research didn't differentiate between diverse industrial fields. A deeper focus on a specific field may lead to different results and better understanding. Another limitation is that the research studied what factors are perceived to be important and in association with business success, while it didn't study how these factors really affect the success of MSMEs. Also, the research only focused on 6 factors which were suggested through literature, adding more potential factors may yield different results. The research also builds on self-administered questionnaires which might yield biased results. Another major limitation is the cross-sectional time frame used while collecting the data.

14.Future Research

Future research considering broader population while focusing on a specific industry can yield more specific results. Also,

including more potential factors while considering other enterprise and environment-related factors can enrich the outcomes of this research. Furthermore, deeper study aiming to measure and understand how the factors influence the success is encouraged, this could be achieved through multi-method research employing qualitative data along with quantitative figures to generate more in-depth explanations. Also, utilizing other quantitative measuring instruments, which may limit self-reported bias, while giving more explanations for the factors is encouraged.

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