Jordan Journal of Business Administration, Volume **19**, No. **4**, **2023**
DOI: https://doi.org/10.35516/jjba.v19i4.1429

The Internationalization Process of Tunisian Small and Medium Enterprises (SMEs) in Africa

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ABSTRACT

In this paper, the author analyzes the role of several determinants in the internationalization process of Tunisian small and medium enterprises (SMEs) in Africa and their consequent performance. A quantitative study was carried out on 46 companies operating in information and communication technologies (ICTs). SPSS and Smart PLS were used to analyze the obtained data. The results demonstrate the importance of the total mediating role of international entrepreneurial orientation (IEO) in the relationship between competitiveness and international performance. However, networking generates a direct effect on international performance. Tunisian SMEs in the ICT industry are called upon to review their African-market methods of management and inspection to guarantee optimal use of resources and avoid the loss of business opportunities. Besides, according to this research, the weight of Tunisian SMEs' competitive advantage allows them to adopt entrepreneurial behavior characterized by innovation, proactivity and risk-taking in Africa. This pushes them to adopt a permanent design and adaptation of valuable methods of value creation, innovation, and localization of opportunities. This entrepreneurial behavior also compels companies to better structure their management, develop skills of intuition and anticipation in the market, take risks as well as initiatives and consequently achieve greater performance and sustainability.

Keywords: International entrepreneurial orientation (IEO), International performance, Environmental uncertainty, Networking, Competitiveness, Market standardization.

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Received on 29/7/2021 and Accepted for Publication on 9/1/2022.

تأثير محددات التدويل على الأداء الدولي للمؤسسات التونسية الصغيرة والمتوسطة الناشطة في إفريقيا: الدور الوسيط للتوجه الدولي لريادة الأعمال

***خالد طمزيني*[1]**

ملخص

في هذه الورقة، يحلل الباحث دور العديد من المحددات في عملية تدويل المؤسسات التونسية الصغيرة والمتوسطة (SMEs) في إفريقيا، وبالتالي في أداء تلك المؤسسات. تم إجراء دراسة كمية على 46 مؤسسة تعمل في مجال تكنولوجيا المعلومات والاتصالات. واستخدمت SPSS وSmart PLS لتحليل البيانات التي تم الحصول عليها. وأظهرت النتائج أهمية دور الوساطة الكلي للتوجه الدولي لريادة الأعمال في العلاقة بين القدرة التنافسية والأداء الدولي. ومع ذلك، فإن الربط الشبكي له تأثير مباشر على الأداء الدولي. والجدير بالذكر أن المؤسسات التونسية الصغيرة والمتوسطة في صناعة تكنولوجيا المعلومات والاتصالات مدعوة لمراجعة أساليب السوق الإفريقية للإدارة والتفتيش لضمان الاستخدام الأمثل للموارد من ناحية ولتجنب ضياع فرص الأعمال من ناحية أخرى. إلى جانب ذلك، ووفقًا لهذا البحث، فإن ثقل الميزة التنافسية للمؤسسات التونسية الصغيرة والمتوسطة يسمح لها بتبني سلوك ريادي يتميز بالابتكار والاستباقية والمخاطرة في إفريقيا. وهذا يدفعها إلى تبني تصميم دائم وتكييف أساليب قيمة لخلق القيمة والابتكار وتوطين الفرص. هذا السلوك الريادي يجبر المؤسسات أيضًا على هيكلة إداراتها بشكل أفضل، وتطوير مهارات الحدس والتوقع في السوق، والمخاطرة والمبادرات، وبالتالي تحقيق أداء أفضل واستدامة أكبر.

الكلمات الدالة: التوجه الدولي لريادة الأعمال، الأداء الدولي، اللّايقين البيئي، الربط الشبكي، القدرة التنافسية، توحيد السوق.

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تاريخ استلام البحث 2021/7/29 وتاريخ قبوله 2022/1/9.

INTRODUCTION

Since 1986, when the International Monetary Fund's structural adjustment plan was put in place, Tunisian companies have opened up horizons to strategic partnerships, especially with the countries of the Mediterranean basin (Mansour et al., 2014). These partnerships have opened up prospects for great mobility among experts and consultants by accelerating the transfer of European know-how to Tunisian managers (Mansour et al., 2014), particularly in companies in the Information and Communication Technology (ICT) industry, which have experienced a significant growth, since their founders have lived, worked and studied abroad, especially in Europe. Consequently, they have acquired technological experience and knowledge, enabling them to play a fundamental role in identifying opportunities, especially at the international level (Mejri and Ramadan, 2016).

On the other hand, the liberalization of the Tunisian economy started gradually in the 1990s with the signing of up to 50 agreements with neighboring countries (especially in Europe and Africa), which justified a foreign policy known for the diversification of the country's export base and business partners. Since the 2000s, the Tunisian government has launched an Export Development Program (EDP) in partnership with the World Bank aimed mainly at facilitating the access of Tunisian SMEs to foreign markets (Tunisian Ministry of Commerce, 2017). Only the values of exports to Africa have been steadily increasing, particularly between 2014 and 2015, despite the economic difficulties experienced during this period. In fact, African countries, such as Ghana, Senegal, Cameroon and Ethiopia, attract Tunisian SMEs because of their promising development, particularly in ICT. According to the National Statistics Institute (NSI, 2017), Europe and recently Africa are considered as the main destinations for Tunisian exports.

Despite this data, several exporting companies which are considered new in the ICT industry do not always present clear objectives and try to adopt different structures for export operations (Khemakhem, 2010). Nevertheless, according to Mejri and Ramadan (2016), Tunisian exporting companies experience flexibility in adapting to the regulatory specificities of each country and a certain aggressiveness, in particular in the African market, as well as a complete knowledge of the targeted context.

Currently, Tunisia has not yet reached its objectives in terms of the values of exports targeted at Africa. However, knowing the characteristics of these markets (geographic proximity, growth and rapid technological development), certain government actors (UTICA-Tunisian Union of Industry, Commerce and Crafts, chambers of commerce, export advisors) have set up a specific national program for Africa to help and advice Tunisian companies and especially SMEs operating in the ICT industry. The latter are seeking to export to these countries and are faced with the challenge of accelerating operations towards this market, which is attracting several players from all over the world. In 2008, Microsoft and the European Union sponsored a roadmap with a vision to develop the technological environment of African countries. Thus, several countries were engaged in this process, which has contributed massively to the development of ICT in Africa (Dakouré, 2014), in particular thanks to the rapid adoption of technologies and the orientation of foreign investors towards this continent, which now offers great investment opportunities and realizes huge profits (Essoungou, 2011).

The venture capital landscape in Africa is growing at an unprecedented rate, as is the number of Africa-based and Africa-focused venture capital firms and funds, with venture capital investments in Africa reaching a high record in 2019. This was just revealed in a report published by Google and the International Finance Corporation (IFC).[1]

Access to a large single market is essential:

Nigeria is currently Africa's largest single market and remains the continent's leading investment destination. However, when the AfCFTA[2] is rolled out across the continent, markets should become easier to access.

Africa's attractiveness as a venture capital investment destination continues to grow, attracting investors willing to take up-front risks to expand the digital ecosystem on the continent based on exciting opportunities and the market's long-term business potential. The positive perception and investor confidence are supported by encouraging macroeconomic indices and demographic dividends on the continent. The flexibility of undertaking business, improving business environments and the youngest and fastest-growing workforce in the world are supporting this growth. Strengthened government policies, in addition to in addition to promoting better cooperation among both the regions of the continent and various sectors of the economy, further enhance investor confidence.

While there are a large number of challenges facing businesses in the African ecosystem, there are also many opportunities. Venture capital funds are growing and expanding across the continent, with existing funds increasing the capital available to them and new funds opening up to target specific sectors and regions. The venture capital landscape in Africa is expanding at an unprecedented rate, as is the number of Africa-based and Africa-focused venture capital firms. According to Ventureburn,[3] more than 20 new funds or financing initiatives were launched or in the process of being launched in 2019. However, despite this progress, Africa is still at an early stage compared to other emerging multi-country markets such as Southeast Asia. There remain many opportunities for venture capital investments in Africa and for governments to become more investor-friendly.

The first quarter of 2020 closed with $350 million in total funding, according to a study by Briter Bridges,[4] with South Africa ($112 million), Nigeria ($74 million), Kenya ($62 million) and Egypt ($51 million) as the top funding destinations. These same countries also collectively received the largest share of funding in 2019. While funding figures for January and February in 2020 were mostly in line with expectations, March saw an 80% drop in funding as the COVID-19 pandemic reached the continent. Notable rounds in Q1 2020 are Jumo's $55 million debt and equity financing round in South Africa, Flutterwave's $35 million round in Nigeria and Sendy's $20 million round in Kenya (Le Manager, 2020).

Currently, and especially with regulatory reforms, several African countries have opened their markets to international competition and private investment in the ICT industry. Rwanda, Egypt, Kenya, South Africa, Seychelles and Tunisia are considered the most ambitious countries in Africa in this industry (Essoungou, 2011). The Tunisian vision is of an orientation towards external markets, mainly in Africa, given these markets' considerable growth in recent decades. Thus, according to statistics from the Tunisian Ministry of Commerce (2017), Tunisia exports mainly to Algeria, Libya, Morocco, Egypt and Ethiopia, but also to other African countries to a lesser extent. In addition, a study by the International Telecommunication Union (ITU) showed that Tunisia occupies the first position among African countries in terms of ICT development (ITU Report, 2016). This gives it a certain expertise that it can develop in foreign markets.

In addition, since 2011, Tunisia has drawn up a national strategic plan, "Tunisie Digitale, 2020" (2014-2020), which mainly aims to develop the various electronic services to make the knowledge industry competitive, especially at the international level (Report on ICT in Tunisia, DG Trésor 2016). Indeed, the ICT industry employs nearly 9% of the workforce (86,000+ people) and represents 7.5% of the GDP. Tunisia is booming in this industry (nearly 1,600 companies were working in this industry in

2016), while in 2020, there were 2,120 SMEs, of which 632 are fully exporters. Tunisian SMEs operating in the ICT industry form "the backbone of the economy, contributing significantly to growth, innovation and success of societies, specifically in developing countries" (Amaradiwakara and Gunatilake, 2017 *in* Al-Hyari, 2021: 509; Chakraborty et al., 2019).

Based on the above developments, researchers are encouraged to evaluate this situation and question whether these SMEs operating in the African environment have reached international performance (IP).

Knowing that the characteristics of Tunisian SMEs correspond to those observed in all developing countries [e.g. small size, lack of internal and external growth, low qualification of employees, failing financing structures and predominance of the informal sector (Galiegue and Madjimbaye, 2007; Tidjani, 2006)], an essential question arises:

Given the promising development of the ICT industry in Africa, how do Tunisian SMEs see their prospects on this continent, especially after the massive adoption of ICTs (Dakouré, 2014) and investment opportunities to make big profits (Essoungou, 2011)?

Consequently, this research aims to study the main motivations for the internationalization of Tunisian SMEs in the ICT sector in the African market. What are the main determinants of this internationalization? How could these determinants affect their international performance? To answer these questions, the phenomenon of international entrepreneurial orientation (IEO) is mobilized. IEO can lead us to understand the process of discovering and exploiting opportunities outside the domestic markets, allowing the development of competitive advantage and gaining international performance (Zahra and George, 2002). In fact, IEO is considered as a preliminary phase to internationalization (O'Cass and Weerawardena, 2009) and positively affects SMEs' international performance (Moreno and Casillas, 2008; Slevin and Terjesen, 2011). The international entrepreneurial orientation refers to the taking of opportunities on the international market with innovative, proactive and risk-seeking behavior (Alkshali and Badran, 2020; Glavas and Mathews, 2014; Wang, 2008).

Thus, our research question is as follows: Does international entrepreneurial orientation (IEO) mediate the relationship between the determinants of internationalization and the international performance of Tunisian SMEs operating in the African market?

Literature Review and Research Hypotheses

Several studies have highlighted the important role that IEO can play in improving a company's international performance. Likewise, IEO can be influenced by both external and internal factors (networking, market standardization, competitiveness and environmental uncertainty). The author has chosen to stress the role of these factors in determining international performance as well as the mediating role of IEO in the relationship between these determinants of internationalization and international performance. The study of mediation assumes a role in revealing the nature of the main effect (determinants of internationalization – international performance in this case) as well as the explanation of the reasons for this effect (Hair et al., 2017). Therefore, the first step involves testing the direct effects of the determinants on performance and then testing the indirect effects through IEO.

The Determinants of Internationalization

Among the determinants of internationalization proposed by the literature, the author distinguishes networking, competitiveness, market standardization and environmental uncertainty.

Networking

The network is defined as a channel of reciprocal transfer of resources and knowledge between

companies. The extent of the benefits of networks depends on the firm's involvement with its partners (Roolaht, 2006).

In the Uppsala model of internationalization, the commitment to internationalization is the result of the application of the "network approach", which is mainly based on the quality of relationships between companies. SMEs engaged in the internationalization process try to have good relationships and large networks to succeed in the internationalization operation (Lloyd-Reason and Mughan, 2002). Relationships and networks generate complementarity and competitiveness on an international scale (Ruzzier et al., 2006). SMEs are becoming more and more capable of acquiring new knowledge internationally relating to know-who and know-how (Johannisson and Monsted, 1998). In addition, Rothaermel and Deeds (2006) suggest that effective management of networks at the firm level could encourage the entrepreneurial activity of firms, especially those working in the high-technology field. These firms often have to rely on extensive inter-firm cooperation to discover, develop and commercialize new products (Powell et al., 1996). Commonly, there are two types of networks: personal networks (informal) and business networks (formal) (Jin and Jung, 2016).

International SMEs pay more attention to personal networks, because they are usually characterized by strong, cohesive, informal goodwill and trust connections (Hite and Hesterly, 2001). A significant number of previous studies highlighted the benefits of personal networks for SMEs. These reduce the time transaction costs, risks and uncertainty associated with entering a foreign market while strengthening credibility and trust among partners. Personal networks facilitate intermediation (Jin and Jung, 2016).

Hence, the Following Hypotheses are formulated:

H1a: Networking has a direct effect on the international performance of Tunisian SMEs.

H1b: There is an indirect effect between networking and the international performance of Tunisian SMEs through IEO.

Competitiveness

Twomey (2002) argues that competitiveness does not come primarily from the market. A firm is said to be competitive if it is able to adapt to its environment and influence it using its human assets as well as their interactions, relationships and roles in the application of knowledge. A competitive firm is one that has learning capacities and skills that develop innovation and allow learning and the transfer of knowledge.

The international competitiveness of a firm can be defined as the set of its results (financial and non-financial) from activities in foreign markets that host other companies that offer the same products and services (Lopez and García, 2005; Toppinen et al., 2007). The results can be expressed in terms of exports, foreign direct investment (FDI), new market shares,… etc. (Peña-Vinces et al., 2012). These results come from the resources of firms that opt for internationalization and which are sources of international competitive advantages (Barney, 1996; Lopez and Garcıa, 2005).

Thus, competitiveness in a specific industry, such as ICT, can play a determining and favorable role in internationalization and, consequently, in international performance (Boter and Holmquist, 1996; Wheeler et al., 2008). Thus, the confidence of certain Tunisian SMEs operating in the ICT industry, since they have the conceptual and execution capacities necessary to be competitive, as well as their good reputation constitute assets for them to improve their competitiveness in the market (African Manager, 2018). Hence, the following hypotheses are formulated:

H2a: Competitiveness has a direct effect on the international performance of Tunisian SMEs.

H2b: There is an indirect effect between competitiveness and the international performance of Tunisian SMEs through IEO.

Market Standardization

According to Nkongolo-Bakenda et al. (2010), the standardization of international markets appearing in niches or groups of countries allows several firms to achieve economies of scale and consequently to internationalize into markets with the same characteristics (customers with the same needs, the same purchasing, sales, partnerships, products marketed, … etc.). The characteristics of the target market seem to be the most important factor for standardization decisions (Erdogmus et al., 2010). Market segments that share the same demographic and socio-cultural characteristics and the same homogeneous needs and behavioral habits of customers in target markets are considered as an important factor for the standardization practices of brands and products (Craig and Douglas, 2000; Ozomer and Simonin, 2004; Samiee and Roth, 1992). The higher the convergence of customer behavior in target markets, the higher the level of standardization and the greater the incentive to seek opportunities. On the other hand, the greater the intensity of competition in the target markets, the greater the level of standardization (Erdogmus et al., 2010). Therefore, the following hypotheses are formulated:

H3a: Market standardization has a direct effect on the international performance of Tunisian SMEs.

H3b: There is an indirect effect between market standardization and the international performance of Tunisian SMEs through IEO.

Environmental Uncertainty

The entrepreneurial spirit at the international level benefits from the business environment (Mtigwe, 2005). Indeed, when SME managers travel and quickly discover new foreign markets, they are more inclined to internationalize, because they perceive the business environment as less risky than managers who have never traveled (Manolova et al., 2002). In this regard, several studies confirmed the positive relationship between a stable environment and SMEs' internationalization strategies. In addition, technological development can also support the operation of internationalization (Sedoglavich, 2012).

Usually, companies view a target market as uncertain when they do not have sufficient information, or when there is a great geographic or psychic distance (Johanson and Vahlne, 2009). However, the reality of the relations of certain companies with the African market is not the same, given the geographical and psychological proximity between Tunisia and other African countries (technical cooperation agreements, exchanges of skills, visits by political leaders, conferences of partnerships, existing commercial exchanges, … etc.). This has led to the establishment between these markets of what Johanson and Vahlne (2009) call business relationships of emotional and affective aspects, which generate social dynamics of trust, mutuality, dependence and power between the different markets, especially those that are close. Moreover, the environment plays an important role in the internationalization of firms, especially those operating in a transition economy. Thus, access to technology, interaction with institutions, reduction of corruption and insecurity are all factors that can reduce uncertainty in the market and subsequently the incentive to adopt entrepreneurial behavior (Lamotte and Calovic, 2015). When the environment is certain, risk-aversion decreases, which positively affects performance (Kraus et al., 2012). To this end, the following hypotheses are proposed:

H4a: Environmental uncertainty has a direct effect on the international performance of Tunisian SMEs.

H4b: There is an indirect effect between environmental uncertainty and the international performance of Tunisian SMEs through IEO.

The Mediating Role of International Entrepreneurial Orientation (IEO)

Over the past two decades, many companies have

shown a great interest in locating abroad to seek new opportunities. A combination of multiple factors explains the internationalization of the latter. Thus, factors linked to available ICTs, managerial skills, innovation capabilities among others have greatly affected exports in all industries (Lecerf, 2012). The competitiveness of the target market, its standardization and its stable environment have prompted managers to make strategic decisions relating to internationalization. "The relative importance of the various traditional determinants of internationalization remains imperfectly understood" (Lecerf, 2012). This variety of determinants that push any company to internationalize is embodied in a gradual process. Through this process, companies become more and more capable of learning about and seizing external market opportunities, developing necessary talents, adapting quickly to needs and being able to innovate and maintain high-quality and competitive products (Fernández Olmos and Díez-Vial 2015; Harrison et al., 2000; Johanson and Vahlne, 1977; Kim et al., 1993).

Thus, driven by opportunities, resources, and international performance objectives, SME managers seem to be forced to adopt entrepreneurial behavior to directly influence global and international performance (Knight, 2000, 2001; Lumpkin and Dess, 1996; Rauch et al., 2009). IEO can be defined as being a preliminary and essential phase to internationalization (O'Cass and Weerawardena, 2009) and positively affects SMEs' international performance (Jantunen et al., 2005; Knight, 2001; Moreno and Casillas, 2008; Ripollés-Meliá et al., 2007; Slevin and Terjesen, 2011; Wang, 2008). International performance is considered as a multi-dimensional construct including many dimensions, such as international sales growth, international market share, international profitability, international growth, etc. (Bianchi et al., 2017; D'Angelo and Presutti, 2019; Moen et al., 2008).

Based on the literature review conducted by Beleska-Spasova (2014), Falahat et al. (2020) argued that management characteristics and perceptions, export strategy, marketing mix, export expertise, export knowledge, business relationships, firm characteristics and export and domestic market characteristics are considered as the determinants of international performance.

Cabral, Carvalho and Ferreira (2020) defined SMEs' international performance as a multi-dimensional construct that examines and assesses different organizational objectives concerning the firms' international actions. SMEs' international performance has three dimensions: financial, strategic and overall performance. Each firm's international actions should be assessed based on these three dimensions.

Acosta et al. (2018) argued that export SMEs' international performance is determined by various strategic variables, for instance strategic orientations and dynamic capabilities, which at the same time are interrelated. Likewise, they stated that export SMEs' international performance is positively influenced by network capability and their international entrepreneurial orientation, although not by their international market orientation.

Pham et al. (2017), cited by Falahat et al. (2020), found positive associations of market intelligence learning capability, product innovation capability, pricing capability and marketing communication capability with the international performance of exporting SMEs from emerging markets.

IEO, known for its strategic aspect in the entrepreneurship literature (Knight, 2001; Wales et al., 2013), refers to the seizing of opportunities on the international market with an innovative, proactive and risk-taking (Alkshali and Badran, 2020; Genc, Dayan and Genc, 2019; Glavas and Mathews, 2014; Jantunen et al., 2005; Wang, 2008). Innovative behavior mainly refers to the creation of new products or processes. According to Lumpkin and Dess (2001), innovation can be defined as creativity or experimentation when a firm wants to introduce new

products or technologies to apply research and development of new processes. As for risk-taking, this mainly refers to the strategic decision-making of entrepreneurs who build a vision towards the future with more optimism and confidence (Wolff et al., 2015). Venkatraman (1989) defined proactivity as the introduction of new products or brands before competitors, while Covin and Slevin (1989) associated proactivity with aggressive action towards competitors when they try to win or retain a competitive advantage.

This international entrepreneurial behavior depends on the internal characteristics of SMEs (profiles of leaders and managers, resources and skills and organizational structure) (Brouther et al., 2014; Covin and Miller, 2014; Mostafa et al., 2005; Nummela et al., 2004; Oviatt and McDougall, 1994; Weerawardena et al., 2007), but also external factors (business networks, environmental characteristics, …etc.) (Covin and Slevin, 1991; Dess et al., 1997; Mathews and Zander, 2007; Miller, 1983; Wiklund and Shepherd, 2005; Zahra, 1993; Zahra and Covin, 1995). Indeed, an SME with an international entrepreneurial orientation will succeed better in turbulent contexts, internationalize quickly and widely and subsequently achieve international performance (Zahra and George, 2002).

From a general point of view, entrepreneurial orientation is considered as a facilitator of firm performance and growth (Carree and Thurik, 2000; Chow, 2006; Rauch et al., 2009). Several studies indicate that company performance is positively influenced by entrepreneurial behavior (Covin and Slevin, 1989; Lumpkin and Dess, 1996). In addition, the effect of entrepreneurial orientation varies according to the context, the type of industry, the market situation, the size of the firm, … etc. Hence, the non-obviousness of the results and the relative importance of the effect of the context justifies the choice of the Tunisian context, which represents an example of an economy in transition (Grande et al., 2011).

According to Filser and Eggers (2014), performance indicators (financial and non-financial) measure the outcome of the internationalization experience. That said, the mediating role of IEO between the determinants and performance is explained by the fact that the latter is constantly generated by the determinants of internationalization and pushes companies to adapt more easily to changes and to proactively shape the environment while fostering their growth and performance potential. In addition, IEO could bring competitive advantages and thus have a positive influence on performance (Hult et al., 2004; Wiklund and Shepherd, 2005). Thus, entrepreneurial orientation leads companies to develop new opportunities (Lumpkin and Dess, 2001). It includes innovation, risk-taking and proactivity. They lead companies towards export experiences and therefore towards proactive orientation (Okpara, 2009). Indeed, companies seek new opportunities in foreign markets and allocate significant resources to information research. They are prepared to accept short-term losses to gain long-term market share. They seek the information necessary for development and therefore the achievement of performance; for example, by testing their products and carrying out market research in foreign markets, as well as gathering information directly from distributors and suppliers, who are important sources of information. Hence, the following hypothesis is proposed:

H5: IEO has a direct positive effect on the international performance of Tunisian SMEs.

The Conceptual Model

From the above developments, the conceptual model (see Fig. 1) proposes a causal relationship between the different determinants that influence a company's international strategic decisions (Porter, 1980). Thus, the competitive advantage acquired by companies in the market, the standardization of consumer needs, low uncertainty, ease of forecasting,

a stable environment and networking push companies to widely expand their business activities internationally (Bianchi et al., 2017; Nkongolo-Bakenda et al., 2010; Ruzzier et al., 2006). The determinants studied in this research allow us, on the one hand, to see how Tunisian SMEs perceive the African market and on the other hand, to define the most important determinants that affect these SMEs' international entrepreneurial orientation.

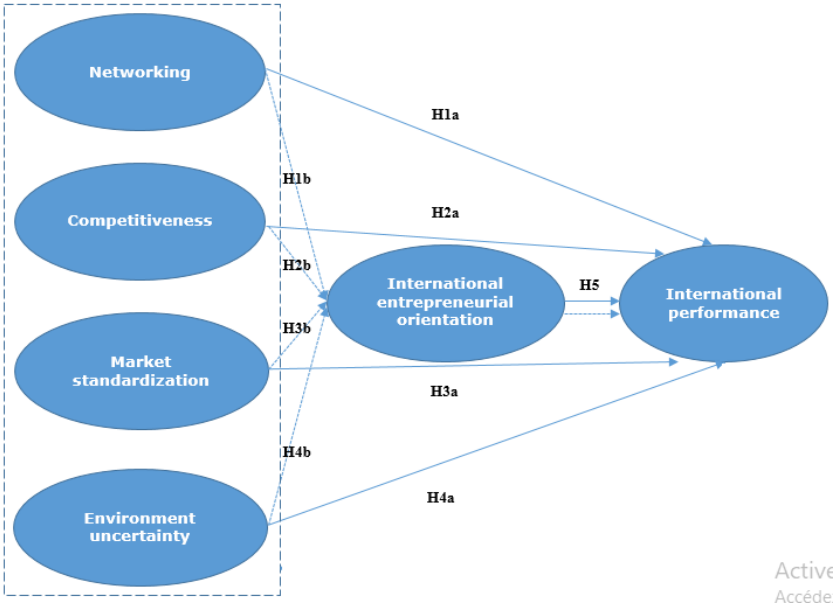

Figure (1)
Conceptual model

Methodology

Industry and Sample

The development of the ICT industry in African countries and the interest of Tunisian companies in these countries have prompted the author to choose this industry as the field of investigation for this research.

The choice of the sample was based on two criteria: being in the ICT industry and exporting to African countries, which constitutes 6.7% of the total exporters in Tunisia. Thus, the author targeted companies by e-mailing a questionnaire to the founders and CEOs of 215 SMEs and 46 completed questionnaires were collected, giving a response rate of 21.39% (see Table 1 for characteristics). The investigation period (between March 15 and May 15, 2020) corresponds to the lockdown due to the COVID-19 pandemic. As a result, the majority of SMEs were inaccessible.

Table (1)
Characteristics of the study sample

N valid 46	Mean/Percentage	SD	Skewness	Kurtosis
N employees	38.39	31.54	0.472	0.688
N years since the creation	11.65	7.82	1.393	2.810
N years since the first exportation	6.39	3.19	-0.100	-1.483

Method of market penetration:	43.5%	-	0.412	-1.252
- Direct	34.8%			
- *Via* agents/distributors	21.7%			
- Subsidiaries				
Export phase	17.4%	-	-0.698	-0.934
- Nearby markets	30.4%			
- Confirmed exporter	52.2%			
- More distant markets				

Measures

The questionnaire is made up of three parts. The first part deals with the motivations for internationalization, as well as the modes of entry into the African market. The second part proposes questions relating to the determinants of internationalization (networking, competitiveness, environmental uncertainty and market standardization). The third part concerns the mediating variable between the determinants of internationalization and performance: international entrepreneurial orientation (IEO).

In order to test our research model and the related assumptions, we operationalized the variables with reference to existing scales that were used in previous work (see Table 2). A five-point scale was used for each dimension, ranging from 1 (strongly disagree) to 5 (strongly agree). The respondents were asked to indicate their level of agreement or disagreement with each of the proposed statements.

Table (2)
Research variables and measurement scales

Variables	Scale used	Items
International performance	Measurement scale developed by Blesa and Ripolles (2008) and Kenny and Fahy (2011) composed of 4 items	There is a remarkable growth in sales in the African market over the past three years / Our market share in Africa has improved over the past three years / International profitability has improved over the past three years due to our entry into the African market / We are satisfied with our work in the African market
International entrepreneurial orientation	Measurement scale developed by Bianchi et al. (2017) composed of 5 items	Our firm sees Africa as a market of opportunities / Our company culture is to explore and pursue new business opportunities in the African market / Our top management constantly communicates its intention to succeed in the African market / Our top management develops resources to achieve the objectives in the African market / Our top management attaches great importance to entering the African market
Networking	Measurement scale developed by Belso-Martínez (2006) composed of 3 items	Public institutions are present in the African market to help businesses and facilitate operations / Contacts of African customers are accessible / The contacts of African suppliers are accessible
Competitiveness of Tunisian SMEs	Measurement scale developed by Belso-Martínez (2006) composed of 5 items	Please indicate your level of agreement or disagreement with each of the following statements: There are not many existing competitors in the key African ICT market / Our activities in the African market allow us to achieve economies of scale / Our prices offered on the African market are very competitive compared to our competitors / Our geographic proximity to the African market allows us to have an advantage over other competitors outside Africa / The recognized know-how of Tunisian companies on the African market allows us to gain an advantage over other competitors outside Africa

Market standardization	Measurement scale developed by Belso-Martínez (2006) composed of 4 items	The needs of customers in the African market are very similar to those in Tunisia / Purchasing practices among African customers are similar to those of Tunisians / The technologies used in the African market are similar to those that exist in the Tunisian market / Existing competitors on the African market sell standard products
Environmental uncertainty	Measurement scale developed by Belso-Martínez (2006) composed of 4 items	We rarely change our marketing practices in the African market / The rate of obsolescence is high for certain products/services on the African market / Competitor actions are easy to predict in the African market / Customer preferences are easy to predict in the African market

The data was analyzed first using SPSS software and then using SmartPLS software. The PLS-SEM method makes it possible to analyze data with a limited number of respondents and to solve the problems of data non-normality (Hair et al., 2012). In addition, several studies have approved the performance of the PLS-SEM approach when the sample is limited (from 30 observations, it is possible to apply the PLS-SEM approach) (Chin and Newsted, 1999; Hui and Wold, 1982; Reinartz et al., 2009). Moreover, comparing the PLS-SEM approach to the covariance-based (CB-SEM) approach, it turns out that PLS-SEM has statistical power when the structural model is complex or the sample is limited (Hair et al., 2017).

Results

In what follows, the measures assessment, descriptive analysis and finally the analysis of structural links will be presented.

Measures' Assessment

The results prove the consistency of the measurements of the constructs, since the values of these indicators for all the variables have an average between 0.7 and 0.9 (or even 0.95, which is considered satisfactory).

For the first variable of the determinants of internationalization, "networking", two items were retained, with $\alpha = 0.877$ and Composite Reliability = 0.939. For the variable "competitiveness of Tunisian SMEs", four items were retained, with $\alpha = 0.730$ and Composite Reliability = 0.828. For the variable "market standardization", four items were developed, but only two variables were retained, with $\alpha = 0.514$ and Composite Reliability = 0.790. Finally, four items for the variable "environmental uncertainty" were developed and only three were retained, with $\alpha = 0.853$ and Composite Reliability = 0.899. Regarding the variables to be explained, in particular the mediating variable "international entrepreneurial orientation" and the dependent variable "international performance", the results showed very good measures of reliability, since all the items used are retained (with respectively $\alpha = 0.892$ and Composite Reliability = 0.922 and $\alpha = 0.796$ and Composite Reliability = 0.806).

However, regarding the validity (convergent and discriminant), which is an indication of an item's ability to represent its construct, the values of the extracted means (AVE) and Fornell-Lacker confirm good results, since the AVEs are greater than 0.5 and the Fornell-Lacker values are all greater than the highest value of the correlation between the items of each construct (Carricano and Poujol, 2008; Hair et al., 2012). All the items retained for this analysis contribute adequately to their constructs, since the values of the loadings of each item are generally considered to be satisfactory (Hair et al., 2012; Henseler et al., 2009; Henseler et al., 2012) (see Table 3).

Table (3)
Validity and reliability results according to the selected items

Variables	Items	Outer loadings	Reliability		Validity	
			Internal consistency reliability		Convergent validity	Discriminant validity
			Cronbach's alpha	Composite reliability	Average variance extracted (AVE)	Fornell-Larcker criterion
Networking	Net2	0.912	0.877	0.939	0.885	0.941
	Net3	0.969				
Competitiveness	Comp2	0.655				
	Comp3	0.716				
	Comp4	0.721	0.730	0.828	0.548	0.741
	Comp5	0.855				
Market standardization	Stand1	0.686	0.514	0.790	0.658	0.811
	Stand3	0.920				
Environmental uncertainty	Env2	0.861				
	Env3	0.940	0.853	0.899	0.750	0.866
	Env4	0.791				
IEO	IEO1	0.779				
	IEO2	0.929				
	IEO3	0.910	0.892	0.922	0.707	0.841
	IEO4	0.668				
	IEO5	0.889				
International performance	IP1	0.943				
	IP2	0.793				
	IP3	0.491	0.796	0.806	0.525	0.725
	IP4	0.584				

Descriptive Analysis

According to this actual study (see Table 1), the majority of responding SMEs are rather young (12 years of existence), with an average experience of 7 years in the African market and an average number of employees of 39 individuals. Thus, the majority of these SMEs are in an advanced phase of internationalization in Africa, a phase during which they seek to develop export activities towards African countries (which are psychologically more distant) (Bilkey and Tesar, 1977; Johanson and Wiedersheim-Paul, 1975).

Table 4 shows that the SMEs in the sample consider the African business environment to be uncertain (2.88), with a fairly weak network of contacts (2.69). The market is considered moderately standard, although these companies consider themselves quite competitive in the African market. Moreover, although these companies have a high entrepreneurial orientation in the African market, their international performance has not reached a high enough threshold. All the distributions of the descriptive results can be considered as normal given

the values of skewness and kurtosis lying between -2 and 2 (Carricano and Poujol, 2008).

Table (4)
Descriptive statistics

	Mean	**SD**	**Skewness**	**Kurtosis**
Competitiveness	3.41	0.568	0.024	-0.812
Market standardization	3.04	0.656	0.233	0.300
Environmental uncertainty	2.88	0.839	0.350	0.908
Networking	2.69	0.931	-0.183	-0.721
IEO	4.24	0.768	-0.661	-0.872
International performance	3.13	-0.996	-0.338	-0.437

From these descriptive results, one can see that the strength of Tunisian SMEs is their competitiveness compared to their rivals in the African market, although the expected performance does not seem to be achieved. Indeed, despite the intention to develop resources to invest internationally and the desire to give more importance to the development of the SME in foreign markets to seize new opportunities, the results achieved are not satisfactory. On the other hand, one can see that IEO is rather important for Tunisian SMEs (4.24). This means that they have invested in innovation and discovering new markets and are willing to take risks to reach those markets.

Analysis of Structural Links

The validation of the structural model consists of testing the structural links. The lower the statistical significance level (which is the probability of error), the better the result. Research generally uses thresholds of 1%, 5% or even 10%. However, it should be noted that in managerial research and more specifically in data collected from companies, a threshold of 10% is generally accepted, because the number of observations in the sample is close to the number of the population studied. In this study, the results will be validated according to the thresholds of 1%, 5% and 10% (Thietart et al., 2003).

The tests of structural links show that there are significant links between certain determinants of internationalization and international performance, with a significance level of less than 10% and 5%, respectively. Thus, networking directly influences performance (p-value 0.040<0.05); however, only competitiveness has an indirect impact on international performance and this is through IEO (p-value 0.088<0.10). The indirect links are tested through the validation of the effects of the determinants of internationalization on IEO and between IEO and international performance. These indirect links will also be used to test the mediating role of IEO in the relationship between the determinants of internationalization and international performance. On the other hand, the links which trace the effects of market standardization and the uncertainty of the environment are not significant. Thus, these two variables did not play any role in this modeling, since their effects on IEO and international performance were not significant (p-values > 0.05 and 0.10, respectively). This means that these variables do not explain the international performance and do not contribute to the mediation of IEO in the explanation of international performance.

The values of f^2 indicate how well an exogenous variable explains an endogenous variable. A value between 0.02 and 0.15 indicates a weak effect, while a value between 0.15 and 0.35 indicates a moderate

effect. A value of f² greater than 0.35 represents a significant effect (Cohen, 1988; Hair et al., 2016). The results presented in Table 5 show *a priori* that despite the significant direct effect of networking on international performance, the explanation is considered weak. On the other hand, international entrepreneurial orientation moderately explains international performance.

To test the mediating effect of international entrepreneurial orientation between the determinants of internationalization and international performance according to the approach of Zhao et al. (2010), the significance of the indirect effects of the determinants of internationalization on international performance through international entrepreneurial orientation must be tested. As mentioned before, the results affirm only one significant indirect link (between competitiveness and international performance). Therefore, one can state that international entrepreneurial orientation can play a mediating role in the relationship between competitiveness and international performance.

There is therefore a complete mediating effect of international entrepreneurial orientation at the level of the relationship between competitiveness and international performance, since the direct effect of competitiveness on international performance is not significant. Therefore, the competitiveness variable affects international performance only through IEO. This means that competitiveness develops the spirit of entrepreneurship, innovation and initiative to achieve good profitability, increased sales, … etc. in the African market. These results confirm previous research which considers that entrepreneurial orientation is a facilitator of performance and growth of companies (Carree and Thurik, 2000; Chow, 2006; Rauch et al., 2009) and that the latter are positively influenced by entrepreneurial behavior (Becherer and Maurer, 1997; Covin and Slevin, 1989; Lumpkin and Dess, 1996; Wiklund, 1999).

Table (5)
Results of structural links

	Original sample (O)	**Standard deviation (STDEV)**	**t-statistics (|O/STDEV|)**	**p-value**	f^2
Networking→International performance	**0.300**	**0.146**	**2.053**	**0.040**	**0.120**
Networking → IEO → International performance	0.033	0.083	0.395	0.693	-
Competitiveness → International performance	0.290	0.181	1.598	0.110	0.079
Competitiveness → IEO → International performance	**0.211**	**0.124**	**1.704**	**0.088**	-
Market standardization → International performance	0.223	0.199	1.121	0.263	0.045
Market standardization → IEO → International performance	0.103	0.105	0.985	0.325	-
Environmental uncertainty → International performance	0.059	0.353	0.167	0.868	0.002
Environmental uncertainty → IEO → International performance	0.117	0.102	1.144	0.253	-
IEO → International performance	**0.384**	**0.197**	**1.947**	**0.049**	**0.173**

Discussion

In this study, we looked at the mediating role of international entrepreneurial orientation in the relationship between the determinants of internationalization and international performance of Tunisian SMEs operating in the African market. Thanks to this research, three hypotheses (H1a, H2b and H5) were validated (see Fig. 2).

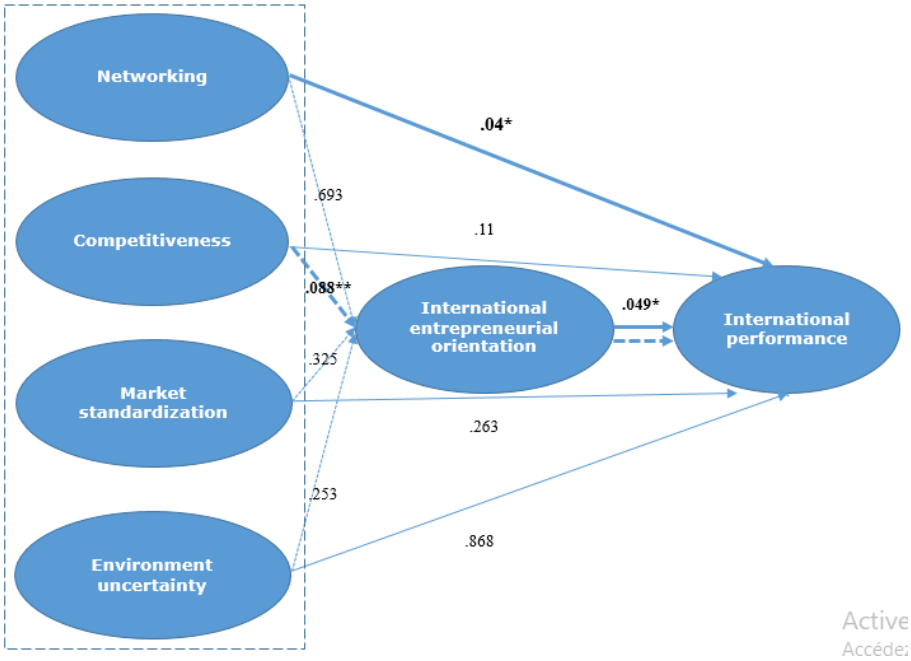

Figure (2)
Final model

Consequently, it appears that the two determining variables relating to the context of the African market and its characteristics (standard market and environmental uncertainty) do not lead Tunisian SMEs to perform well. This means that Tunisian SMEs in the ICT industry see the African market as a difficult market to penetrate and predict, although they benefit from a very competitive image in this market, which also offers them several business opportunities. Indeed, according to Tunisian leaders, the African environment is turbulent and uncertain and does not have standard operations. In contrast, the other two determining variables of international performance (networking and competitiveness) influence it in different ways. Networking directly influences international performance, while competitiveness affects international performance indirectly, through IEO. This leads to proposing that the leaders of Tunisian SMEs working in Africa adopt two different, but complementary, management approaches (Jin and Jung, 2016). The first approach is informal, through what are known as personal networks (Hite and Hesterly, 2001): that is to say, the relationship with the outside to develop business relationships and consequently increase profitability and performance in the African market. The second approach is formal, through business networks; that is to say, the effective management of skills that guarantee competitiveness *vis-à-vis* competitors who are in the same market. In this regard, an important question arises: Is the non-effect of uncontrollable variables on performance really due to the African market and its features or due to the failure of Tunisian SMEs to perform their market prospection process? Tunisian SME managers must give great importance to this question, knowing that the time factor matters a lot in this emerging market. Otherwise, there is a risk of losing opportunities, which may even have repercussions for their survival.

Moreover, the two determining and controllable variables (networking and competitiveness) play their roles appropriately in determining international

performance. Thus, a new question arises in this regard: What relationship-development program do these companies undertake? In other words, how do they guarantee and develop these relationships? Tunisian SMEs must attach great importance to these issues, because the African market is attracting more and more new competitors, especially from Asian countries, such as China. Moreover, the competitiveness of Tunisian SMEs and their capabilities in the market have generated an entrepreneurial and innovative spirit and consequently performance. It must be said that Tunisian leaders benefit from high-level training, as well as an open experience on all continents. According to recent statistics, Tunisia sees around 1000 engineers specializing in ICT per year leaving for Europe (Marrakchi, 2017). Those engineers return to Tunisia after this experience to launch a new project or work in a subsidiary of an international firm. In addition, Tunisia is a country that attaches great importance to intellectual capital and continuously strives to establish a knowledge economy and catch up with developed countries in this area (El Harbi et al., 2011). It remains to be seen what new skills these companies need to make the best use of resources.

Another finding from these results is that IEO quite significantly affects international performance. This confirms the ideas of several academics and professionals who claim that several emerging countries are today a world showcase in the field of ICT. Tunisian SMEs are therefore called upon not only to penetrate these emerging African markets, but also to seek to conserve them. In addition, they are called upon to review their internationalization approach, especially since the results have shown that 50% of the SMEs in this sample are in an advanced phase in their international development despite their rather short experience (6 years on average).

Finally, instilling an entrepreneurial spirit in a company regardless of its activity or field of action remains a key factor in achieving its performance. However, the author assumes that the managerial approach needs to be reviewed to guarantee optimal use of resources and therefore ideal and adequate functioning. The determinants of internationalization do not automatically guarantee the achievement of international performance. Analysis shows that there is a fully mediating role embodied in proactive behavior, risk-taking and development of necessary resources to explore new business opportunities, which is the international entrepreneurial orientation (Filser and Eggers, 2014; Hult et al., 2004; Wiklund and Shepherd, 2005). Entrepreneurial behavior then becomes a primordial dimension in the economies of the various countries of the world, something that is justified by the standing of entrepreneurship in these countries' various economic strategies.

Conclusion

The author concludes that the identification of international opportunities, especially in African markets, becomes an important priority for Tunisian SMEs specializing in ICT. This work attempted to answer the following question: Does international entrepreneurial orientation mediate the relationship between the determinants of internationalization and the international performance of Tunisian SMEs operating in the African market?

This study sheds light on the determinants of internationalization for SMEs' international performance. It reflects that two determining and controllable variables (networking and competitiveness) play their roles appropriately in determining international performance. The results indicated that only competitiveness has an indirect significant effect on SMEs' international performance. This confirms the critical role of the international entrepreneurial orientation for international success.

The author has chosen the variable "international entrepreneurial orientation", because it allows the

progressive path of internationalization to be drawn. It affects the decision-making style, strategic orientation, managerial processes, prospecting for opportunities, developing the necessary resources, … etc., while ensuring business behaviors of innovation, proactivity and risk-taking (Alkshali and Badran, 2020; Covin and Slevin, 1989; Lumpkin and Dess, 1996; Wiklund, 1999; Wiklund and Shepherd, 2003). On the other hand, international entrepreneurial orientation in its various forms (Wiklund and Shepherd, 2005; Zahra and Covin, 1995) plays an important mediating role in the process of internationalization, mainly between the determinants and the results of performance. Indeed, this research confirms that IEO quite significantly affects international performance.

Managerial and Policy Implications

In terms of managerial implications, the results of this study indicate that the weight of the competitive advantage of Tunisian SMEs allows them to adopt entrepreneurial behavior characterized by innovation, proactivity and risk-taking in this market (Alkshali and Badran, 2020; Wolf et al., 2015). This pushes them to adopt a permanent design and adaptation of the different methods of value creation, innovation and localization of opportunities. This entrepreneurial behavior pushes companies to better structure their management (Magretta, 2002; Wirtz et al., 2016), develop skills of intuition and anticipation in the market, risk-taking and initiative and consequently achieve performance and sustainability (Apospori et al., 2005; Cromie, 2000; Thompson, 2004).

Moreover, the results of the current study show a specific strategic orientation of Tunisian leaders, who consider the African market unstable, turbulent and difficult, yet persevere to both develop resources and seek new opportunities. Knowing that several African countries are currently undergoing total economic restructuring, Tunisian SMEs are preparing for a new phase full of opportunities based on their positive competitiveness and brand image in these markets. In addition, Tunisia's current difficult economic situation is pushing these SMEs to seek alternative opportunities, especially after the 2011 revolution and the global COVID-19 health crisis.

As with the managerial implications above, the political implications must be taken into account. Tunisian policy makers, public policies and internationalization promotion programs (such as the Export Promotion Center) should first develop and expand the business network of the Tunisian SMEs that are internationally oriented. As argued by Cabral, Carvalho and Ferreira (2020:18), "public policies face many challenges; namely, in providing firms with valuable information about the different markets, in supporting innovation and R&D, in promoting conditions for the emergence of more venture capital and in providing more mechanisms for the improvement of the firms' international networks".

Knowing that one of the major results of this study indicates that the international entrepreneurial orientation of Tunisian SMEs has a positive impact on their international performance, policy makers should encourage them to expand to international markets and help them improve their international performance by passing tax laws that encourage international risk-taking by providing funds for innovation and by supporting them with aggressive actions towards their competitors when they are trying to gain or maintain a competitive advantage.

Limitations

Despite these encouraging results, this study has some limitations. First, it remains limited by the number of companies studied. Consequently, the data cannot be generalized. Second, the results of this study are limited, because the author used cross-sectional data (Jantunen et al., 2005). In fact, if SMEs change their behavior over time, the results of the

study may change. Thus, as a solution to this limitation, one could appeal to longitudinal studies (Cabral, Carvalho and Ferreira, 2020).

Future Research Avenues

Investigating the possible interrelations among the different determinants of the internationalization of Tunisian SMEs (competitiveness, market standardization, environmental uncertainty and networking) and their impact on the international performance of Tunisian SMEs can be considered as a future avenue of research for this current study.

For future studies, researchers may consider extending the model by including some control variables known for their impact on SMEs' international performance (Nakos, Brouthers and Dimitratos, 2014). These include a company's international experience in terms of the number of years it has operated abroad (Cavusgil and Zou, 1994), the number of countries in which it currently sells products (Brouthers et al., 2009), the firm size as measured by the total number of employees (Lu and Beamish, 2001), the age of the company measured by the number of years of activity, nationality as a dichotomous variable to control for differences between countries of origin; and finally, environmental dynamism (Jantunen et al., 2005).

A clustering analysis can also be undertaken by dividing the sample of SMEs into groups according to their size, international experience, export stages, … etc. in order to identify their specificities and compare their international performance.

List of Abbreviations

SMEs: Small and medium enterprises.
ICTs: Information and communication technologies.
IEO: International entrepreneurial orientation.
EDP: Export Development Program.
NSI: National Statistics Institute.
ITU: International Telecommunication Union.
FDI: Foreign direct investment.
UTICA: Tunisian Union of Industry, Commerce and Crafts, chambers of commerce, export advisors.
PLS-SEM: Partial least squares-structural equation modeling.

Notes

1 The International Finance Corporation (IFC) is an international financial institution that offers investment, advisory and asset-management services to encourage private-sector development in less-developed countries. The IFC is a member of the World Bank Group and is headquartered in Washington, D.C. in the United States.

2 The African Continental Free Trade Area (AfCFTA) is a free trade area which, as of 2018, includes 28 countries. It was created by the African Continental Free Trade Agreement among 54 of the 55 African Union nations.

3 Ventureburn is a Cape Town–based news website under the Burn Media Group's umbrella focusing on technology startups and emerging businesses across South Africa and Africa's hottest innovation hubs.

4 Briter Bridges was founded in October 2018 as a research firm dedicated to collecting, curating and visualizing data on business across underserved markets, with a specific focus on Africa.

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