

# How Do Experts Think? An Investigation of the Barriers to Internationalisation of SMEs in Iran



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## 1 Introduction

In recent years, the importance of small- and medium-sized enterprises (SMEs) in industrialised countries, especially in developing countries, has been increasing. The emergence of new technologies in production and communication has led to fundamental revisions in improving production capacity, improving production methods and distributing and changing the organisational structure of firms, which has generally increased the importance of SMEs (Ng and Kee 2012). Moreover, the reform in the business environment also has a significant impact on all aspects of trade and production. These changes have made a new condition in which the role of SMEs in increasing economic scales and, consequently, improving sustainable development has become more brilliant (Cressy and Olofsson 1997; Cassar and Holmes 2003; Saarani and Shahadan 2013).

Parallel with these major changes, globalisation and its consequences have forced SMEs to pay more attention to their business domain for expanding economics and commercial operations beyond national borders (Jafari-Sadeghi et al. 2019, 2020). As SMEs in many developing countries have started to operate in international markets and extended their presence in the markets of developed countries,

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therefore, it seems it is not only an optional promotion but also is a mandatory factor so that some international enterprises, such as the United Nations Industrial Development Organisation (UNIDO), recognise integration into the global economy through an open economy and democracy as the best way to overcome poverty and inequality in developing countries; therefore, development of the private sector, especially SMEs, is fundamental for achieving these goals (Soto 2015). The report published by the European Commission (2007) indicates the increase in average global trade by 6% since 1990, which is faster than the global gross domestic product (GDP) (Dana et al. 2011; Hope et al. 2019). In the same way, some new challenges such as open economy, shrinking government and privatisation of more specialised professions, increased competitive pressure and reduced direct assistance and government support (Ferraris et al. 2020), particularly in developing countries, have also changed the corporate sales and marketing policies (Dana et al. 2004; Sukumar et al. 2020). Companies have realised the need to offer newer products and expand into wider markets to maintain survival as well as grow more in a complex business environment (Laudal 2011). As a result, the need for internationalisation among SMEs has become more pronounced. Expanding export activities helps companies in increasing profitability and improving trade balances directly and indirectly helps society deal with the problems of poverty and unemployment (Fliess and Busquets 2006; Karadeniz and Göçer 2007; Sadeghi et al. 2019).

Nowadays, many companies are encouraged by governments to consider internationalisation in their medium- and long-term strategies (Al-Hyari et al. 2012; Hajiagha et al. 2013, 2015, 2018). In addition to the inherent inclination of companies themselves, many researchers have studied this issue from different dimensions, and internationalisation has been the subject of much research in the study of corporate strategy, international trade and entrepreneurship (Fliess and Busquets 2006; Al-Hyari et al. 2012; Jafari-Sadeghi et al. 2020). Along with the expansion of long-term horizons and the entry and involvement of companies in international trade, various problems and obstacles in the path of internationalisation became apparent, and researchers, from different scopes, have examined the background and causes of barriers, which has led to the identification of factors limiting the spread of internationalisation (Dana 2001). These restrictions which limit the ability to initiate, develop and sustain business abroad are caused by a wide range of attitudinal, structural and operational factors. Several restrictions in internationalisation are related to the liability of foreignness and newness (Dana 2001). The challenges become more apparent when target markets have fewer intrinsic features similar to the local market (Lange et al. 2000; Korsakiene 2015). Therefore, companies need new resources to enable them to enter foreign markets. The problem of adapting to international markets seems more acute for SMEs because the problem of providing new resources (and especially financial resources) for these companies is bigger than large companies (Fliess and Busquets 2006; Sox et al. 2014).

In this study, we have tried to consider the significant barriers and problems in the path of internationalisation of SMEs, and by collecting experts' opinions and

experiences, we identified a road map for decision-makers in government and SMEs managers.

## 2 Literature Review

The experience of many developing and developed countries shows that the SME sector plays a pivotal role in economic and industrial development for various reasons (Sadeghi and Biancone 2018; Dabić et al. 2020). SMEs, as the backbone of the economy, are important to almost every economy in the world, especially for developing countries. According to the European Commission in 2008, the number of SMEs operating within the EU reached 60 million businesses, which accounted for 99.8% of all enterprises. In East Asia, the figure is estimated at 20–30 million businesses, accounting for about 95% of all businesses in the region (Demary et al. 2016; Yoshino and Taghizadeh-Hesary 2018). Therefore, SMEs are rapidly becoming major players in global markets, and their role will grow if technological and legal barriers are removed and protectionist policies are increased. Shifting the trade and investing scopes from a limited domestic to global makes new opportunities for SMEs (Senik et al. 2010; Dana and Ramadani 2015; Ratten et al. 2017). Therefore, SMEs have realised the importance of “international business” as the most effective way to increase their commercial activities outside the borders of domestic markets. This exchange process can be done through the export or import of goods, services and technology. As a result, “internationalisation” entered the corporate business literature as the mainstay of the business (Angulo-Ruiz et al. 2020).

In business literature, there are many definitions for internationalisation. According to some definitions, internationalisation is considered as the geographical development of corporate economic activities beyond national borders (Bardhan 2002; Beheshti et al. 2016; Farooqi and Miog 2012). Some researchers defined internationalisation as a process that seeks to describe a company’s efforts to expand its economic operations outside the domestic sphere (Labate and Jungaberle 2011; Bang 2013). These common features have led to the internationalisation of companies as a step-by-step process or as a regular and evolutionary process that takes place with increasing international participation and relevant organisational changes (Dana 2004). Meanwhile, some researchers have not accepted these restrictions in the definition of internationalisation to the physical expansion of the company’s scope of activity and consider this concept beyond the geographical concept. Welch and Luostarinen (1988) consider internationalisation as a “process of increasing participation in international activities” (Chong et al. 2019; Dabić et al. 2020). By this definition, they emphasise that a company may be involved in international activities, but there is no avoidance for these activities to continue because internationalisation can occur at any stage of the firm’s development. Internationalisation is a process in which enterprises both increase their awareness of the direct and indirect effects of international exchanges in their future and establish their exchanges with other countries (Paul et al. 2017; Paul 2020). In

some studies, internationalisation is reflected as “the process of adapting corporate processes to international environments” (Sadeghi et al. 2018; Saridakis et al. 2019; Schmid and Morschett 2020). Hollensen (2007) considers “doing business in many countries” to be an important principle of the definition of internationalisation (Harris and Wheeler 2005; Kreutzer et al. 2017; Bowen 2019). Internationalisation is defined as the “process of developing trade relations networks in other countries through expansion, influence, and integration” (Coviello and Munro 1997; Coviello and Martin 1999; Zain and Ng 2006). The focus in this definition is on relationships and connections. Relationships can help companies enter foreign market networks. According to Vahlne and Johanson (2017), connections are an important principle for networking and entering into internationalisation. Mejri and Umemoto (2010) know internationalisation as expanding the company’s business operations to foreign markets, which will not necessarily constitute a one-dimensional process (Ribau et al. 2018; Mahmoudi et al. 2019). From an entrepreneurial perspective, Oviatt and McDougall (2005) see internationalisation as the process of discovering, approving, evaluating and exploiting opportunities across borders to build goods and services (Oviatt and McDougall 2005; Coviello et al. 2011).

Internationalisation is found to be an important aspect of the maximisation of business opportunities, and over the last few decades, many SMEs began internationalisation as a requirement for business success (Ratten et al. 2007; Rundh 2007). Internationalisation is a significant description of the outward movement of the international operations of a firm and widely is applied in international business studies (Ratten et al. 2017). In most studies, internationalisation has been viewed as outward processes that are related to exporting, licensing, franchising and foreign direct investment (Karlsen et al. 2003; Welch and Paavilainen-Mäntymäki 2014).

Considering the advantages of internationalisation is also an important issue for SMEs. SMEs seek to internationalise their business for greater economic and financial benefits, but the practical incentives that motivate them to pursue this process are different (Chiao et al. 2006; Kumar 2008; Landau et al. 2016). Cost is the most important motivation for manufacturers to expand their business and internationalise. Managers of production companies and manufacturers are encouraged to expand their business to enhance competitiveness versus commercial competitors and manufacturers in the market (Mahdiraji et al. 2011, 2019, 2020). Thus, accessing lower labour cost can be a reasonable driver for them. However, for service firms, the prime driver is achieving new knowledge and technology (Doh et al. 2010; Abdul-Aziz et al. 2013). Although it should be noted that market share is also an important driver for firms. When a company feels its business share in the market is decreasing, its knowledge on the domestic markets is not adequate (e.g. Dezi et al. 2019) and the cost of the manufacturing process is increasing, internationalisation can be a good opportunity for expanding the market, accessing new knowledge and finding cheaper material and working labour (Ratten et al. 2007; Paul et al. 2017). These stimuli can also be effective for service companies, but the “time” is more attractive for them than manufacturing firms. Time zone differences enable service providers (SPs) to provide around the clock service. The nonstop

operation helps SPs to enjoy benefits of cost reduction and eliminate the role of “time” to market access, in other words, have their customers at all times (Mokhtarzadeh et al. 2018).

However, sometimes, companies do not succeed in internationalisation and may not reach their predicted plans and the expected outcome of the internationalisation because they cannot overcome the barriers faced in the processes (Shaw and Darroch 2004; Rahman et al. 2017). Barriers to internationalisation have been a favourite subject in the context of exporting activities as in an extreme body of study, researchers focused on its causes and effects in both conceptual and empirical approaches (Ghuri et al. 2003; Leonidou and Theodosiou 2004; Leonidou et al. 2011). These barriers, in business literature, are known as restrictions that affect and disturb the firm’s capability to start, develop or uphold business operations in overseas markets. Leonidou (2004) defined barriers as the limitations that hinder a firm’s ability to initiate, develop or sustain business operations in overseas markets.

Some scholars tried to elaborate on the barrier-related differences for a wide range of firms (Pinho and Martins 2010; Leonidou et al. 2011; Kahiya 2013; Romanello and Chiarvesio 2019). For some firms (that are known domestic firms), the barriers are more related to the management’s desire to not change the current business domain that is rooted of their limited communication with the foreign market, lack of sufficient knowledge of exporting procedures, lack of qualified personnel for conducting exports and an intrinsic fear of overseas product acceptance and raising initial investment (Pinho and Martins 2010). However, for internationalised firms, the barriers are different. These firms have more challenges with export procedures, slow payment by foreign buyers, poor economic conditions in foreign markets, etc. that are more operational barriers and relate to market variables (Leonidou 2004; Taghavifard et al. 2018). Despite these differences in obstacles to internationalisation, there are many common challenges which affect companies in the internationalisation process, and given the importance of this issue, identifying and investigating their effects have always been a favourite to researchers. Different classifications have been proposed to categorise different barriers based on their different characteristics. For instance, in some of the literature, barriers are divided into two groups: initial problems which are linked to shortage of experience and knowledge and ongoing problems that are related to greater participation in foreign markets (Bilkey and Tesar 1977; Chong et al. 2019; Dabić et al. 2020; Morais and Ferreira 2020; Treviño and Doh 2020). Some researchers have divided the challenges of internationalisation into two groups: internal and external challenges. Depending on whether the company can control the problems in internationalisation directly or not, barriers are also divided into two main parts: controllable and uncontrollable factors (Buckley 1993; Kahiya 2013; Chandra et al. 2020a; Mueller-Using et al. 2020). Controllable factors, most of which are internal barriers, are related to internal organisational resources and capabilities, including goods and services policies, sales, pricing and distribution plans that are directly under the control and planning of the management of the enterprise. They can formulate and implement legal restrictions, consumer tastes and strategies based on new conditions in international markets and their competitive challenge. Uncontrollable factors are

known as external factors, depending on the specific market conditions, the external environment of the company which includes the general policies of the government and especially marketing activities by competitors overseas, the legal structure and internal economic conditions of the country, political and economic situation, technology level, geography and culture (Donthu and Kim 1993; Shoham and Albaum 1995; Leonidou and Theodosiou 2004; Goswami and Agrawal 2019).

According to Cavusgil and Nevin (1981), the real barrier for internationalisation for SMEs is internal barriers (Coudounaris 2018), but Gripsrud and Benito (2005) believed in external barriers. Some researchers studied barriers to internationalisation as both aspects, internal and external obstacles (Tesfom and Lutz 2006; Pinho and Martins 2010; Al-Hyari et al. 2012; Uner et al. 2013; Roy et al. 2016a). Classification of internal and external types of barriers has also been done by many researchers. According to Leonidou (2004), internal barriers consist of functional, informational and marketing, and external barriers are classified as to procedural, governmental, task and environmental. Arteaga-Ortiz and Fernández-Ortiz (2010) believed barriers can be categorised into four groups: knowledge, resource, procedure and exogenous. Al-Hyari et al. (2012) studied the barriers to internationalisation in Jordanian SMEs, in four categories, informational and financial as internal barriers and environmental and governmental as external. However, in many studies on this subject, internal barriers have been classified more into four groups, informational, financial, marketing and functional, and external barriers have come more in the form of procedural, governmental, environmental and tariff and non-tariff barriers (Muhammad Azam Roomi and Parrott 2008; Hutchinson et al. 2009; Kahiya 2013; Roy et al. 2016b; Pavlák 2018).

In this study, we examined internal barriers as informational, financial, marketing and functional obstacle and external barriers in procedural, governmental, environmental and tariff and non-tariff barriers to examine a wider range of barriers to internationalisation.

### 3 Methodology

This study is a developmental research based on a systematic approach to designing, developing and evaluating instructional processes. It is also considered applied research because of addressing the issue of barriers to internationalisation. Also, we applied a descriptive research method that consists of a set of methods designed to describe the conditions or phenomena in a study. So, we identified the dimension and barrier indicators through a Delphi survey, and then we analysed the “barriers of internationalization” by using the structural equation modeling and confirmatory factor analysis—to examine the construct validity of factors.

### **3.1 *Delphi Method***

Delphi method is a systematic approach or method of research to extract opinions from a group of experts on a topic or a question or to reach a group consensus through a series of questionnaire rounds while maintaining the anonymity of the respondents and feedback: comments to panel members (Toma and Picioreanu 2016). Delphi is a process which makes use of professional judgments from heterogeneous and independent experts on a specific topic at a large geographical level using questionnaires that are repeated continuously until a consensus is reached. Delphi is a multi-step study method for gathering opinions on the subjectivity of the subject and using written answers instead of bringing together a group of experts; the goal of the consensus is to be able to freely express and revise ideas with numerical estimates (Linstone and Turoff 1975). Delphi's main goal was to predict the future, but it is also used in decision-making, increasing effectiveness, judgment, facilitating problem-solving, needs assessment, goal setting, planning assistance and prioritisation. In the Delphi method, the repetition or iteration of the questionnaire, the expert group, controlled feedback, anonymity, analysis of results, consensus, time and the coordinating team are the main components. According to Gordon (1994), Delphi is a useful communication tool between a group of experts that facilitates the formulation of group members' opinions. Delphi is a way of organising a group communication process so that it enables all members of the group to effectively tackle a complex problem (Toma and Picioreanu 2016). Hsu and Sandford (2007), in their article on the Delphi method, believe this method can be conducted in three or four rounds based on previous successful research using Delphi (Hjarnø et al. 2007; Hsu and Sandford 2007; Steurer 2011).

### **3.2 *The Panel of Experts***

Delphi participants are experts or panellists. They need four characteristics: knowledge and experience in the subject, willingness, sufficient time to participate and effective communication skills, and the key parameters of the study are the competence of the panellists, the size of the panel and the method of their selection. This method is based on finding and gathering experts' opinions in a short term; therefore, final results depend on the expertise of the individuals, the quality and accuracy of the responses and their ongoing involvement and participation during the study period (Steurer 2011). The Delphi panel of experts should have sufficient knowledge and mastery of the subject matter, be involved in the discussion and influence each step of the process outcome. Respondents should be relatively neutral, and the information gained reflects their knowledge and understanding. In addition to the participants' ability, interest and commitment to the subject, continuous involvement in all rounds is also required. We applied the judgmental method and snowball sampling method as a non-probability sampling method to identify the panel

**Table 1** Panel member composition

	Educational level				Quantity	
	Diploma	Bachelors	Masters	PhD	Male	Female
(Industrial experts) executes	5	10	5	4	17	7
Total	24				24	

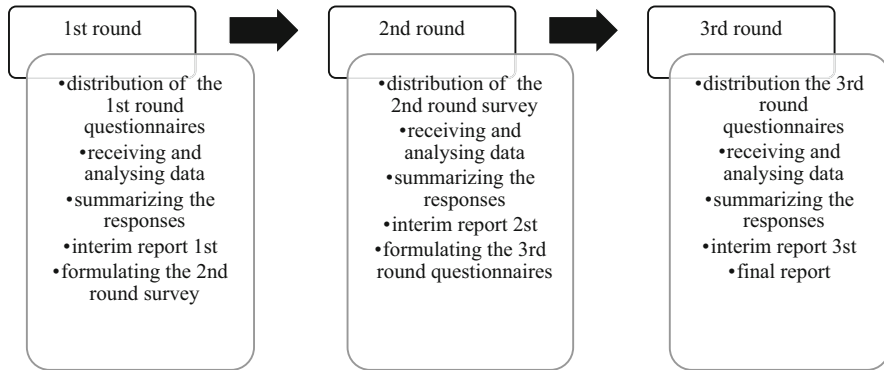
members (Etikan and Bala 2017). Therefore, in a preliminary step, a shortlist of professional investigators and managers was prepared, and then they completed this panel by introducing and adding more members which are known as experts. Therefore, 24 members were selected. Table 1 shows the panel member composition.

As a pre-start activity, which involves developing a research question and a pretest for the appropriateness of words such as ambiguity, the pilot should be conducted outside of the research process and to identify ambiguities and estimate time; of course, researchers may pretest or pilot the questionnaire at the beginning or at each stage to keep the questions clear and focus on the purpose of the research. To identify the barriers, a detailed study was conducted in the research literature to extract important concepts and variables which is finally applied in the Delphi questionnaire. For example, panellists were asked: “To what extent do you agree or disagree that lack of financial resources is a barrier for internationalisation?” A 5-point Likert scale was used for the measure. The questionnaire, also, consisted of open-ended questions that asked participants to improve the questionnaire if they thought the factor or other concepts might have ethical challenges but were not mentioned in the questionnaire; as such, participants were asked: “Please provide other indicators relevant to the barrier of internationalisation.” After collecting the first-round questionnaires, the scores of each of the variables of the questionnaire were determined, and their mean, standard deviation and Kendall’s coefficient of concordance ( $W$ ) were calculated. For each round, the results of the previous round are analysed and the variables that have an average of less than 3 removed and the other variables presented to the participant in the next round questionnaire. In the second round, the respondents also were informed about the group feedback in the first round and the migraine responses individually. In the third round, this trend was repeated, and finally, by expert consensus, 31 variables were obtained. Diagram 1 illustrates the steps of the Delphi method (Fig. 1).

Table 2 shows the descriptive statistics for three rounds of Delphi synthesis ( $M > 3$ ). This analysis has been done by SPSS software. The important issue in the study of the consensus in the Delphi method is the central tendency measures (such as means and standard deviation) in the descriptive statistics because low variation in consecutive rounds is called success.

After three rounds of the research process and based on the results, it was proved that there was a good consensus among the members, and thus the repetition of the rounds ended. In almost all factors, the proportion of members who ranked the order of importance of the challenges according to the group, as a whole, was more than





**Fig. 1** The steps of the Delphi method

50%, and the standard deviation of members’ responses to the importance of success factors in the third round was lower than in the first and second rounds. As mentioned, Kendall’s coefficient of concordance (W) also indicates the extent of the members’ collective agreement on the factors. Kendall’s W ranges between “0” reflecting “no agreement” and “1” indicating the “complete agreement”. After three rounds of research, this coefficient has increased to an optimal figure of 0.6, which confirms that agreement on the degree of importance of ethical challenges has been increased and reached to 60% between experts and panellists (Table 3).

### 3.3 Factor Analysis

After identifying the most important ethical challenges arising from the use of digital technologies in the health sector, the correlation coefficients of the variables are tested. Consequently, the results of the Delphi technique were provided as a second questionnaire to the interviewers in the second statistical sample. The second statistical community includes a wide range of decision-makers in business such as owners and top managers of export manufacturing companies, senior business managers related to the commercial activities and senior employees of marketing, sales and business departments of companies involved in international business activities. Based on the Cochran formula, for the population at the error level of 0.05, we determined the appropriate sample size on  $n = 200$  members. Therefore, 380 questionnaires, which were set up by Likert Scales, were distributed, and finally, by considering all received responses, 212 questionnaires were accepted, which reflects over 60 per cent response rate (Table 4). For the next step, we determined the reliability of the questionnaire by Cronbach’s alpha coefficient. Therefore, in a pretesting of 54 questionnaires, the Cronbach’s alpha was 0.902 that indicates the method employed has an acceptable level of confidence.

**Table 2** Descriptive statistics of Delphi rounds

	Barriers	1st Round		2nd Round		3rd Round	
		M	SD	M	SD	M	SD
1	Difficulty to identify foreign business opportunity	3.23	0.652	3.23	0.652	3.35	0.485
2	Limited info to analysing market	4.14	0.777	4.24	0.779	4.88	0.494
3	Unreliable data about market	4.00	0.980	4.38	0.804	4.58	0.452
4	Limited info and inability to connect with overseas customers	4.45	0.495	4.55	0.498	4.65	0.501
5	Shortage of funds to finance working capital	3.92	0.989	4.22	0.849	4.72	0.532
6	Lack of financial resource	4.46	0.842	4.60	0.489	4.75	0.475
7	Shortage of insurance for internationalisation	3.35	0.562	3.35	0.562	3.42	0.571
8	Difficulty in developing new products for foreign markets	3.22	0.721	3.32	0.729	3.52	0.524
9	Lack of competitive price to costumers in foreign markets	3.32	0.919	3.34	0.921	3.56	0.594
10	Complexity of foreign distribution and finding reliable foreign representative	3.55	0.562	3.55	0.562	3.62	0.571
11	High transportation costs	3.36	0.938	3.54	0.518	3.56	0.558
12	Lack of managerial time to deal with exports	3.58	0.942	4.38	0.814	4.58	0.452
13	Lack of export skills	4.45	0.474	4.55	0.491	3.64	0.424
14	Lack of new technology	4.25	0.843	4.35	0.774	4.59	0.514
15	Insufficient or lack of trained personnel for internationalization	4.44	0.642	4.41	0.638	4.49	0.514
16	Unfamiliarity with the procedures and documentations requirement process	3.68	0.578	3.82	0.562	4.48	0.575
17	Inadequate communications with foreign costumers	3.36	0.938	3.54	0.979	3.48	0.572
18	Slow collection of payment from abroad	4.13	0.805	4.19	0.811	4.36	0.518
19	Difficulty in enforcing contract and resolving disputes	4.38	0.641	4.48	0.633	4.17	0.442
20	Lack of home government supports and incentives and complex foreign bureaucracy	4.62	0.713	4.84	0.412	4.91	0.432
21	Restriction rules on foreign ownership	3.44	0.520	3.78	0.520	3.80	0.527
22	Restriction on movement of people/business persons (such as visa)	4.54	0.588	4.65	0.523	4.72	0.525
23	Unfair treatment compared to domestic firms	4.29	0.875	4.69	0.726	4.60	0.582
24	International sanction	4.72	0.486	4.72	0.498	4.91	0.337
25	Poor economic condition abroad	4.44	0.632	4.45	0.635	4.65	0.524
26	Currency fluctuation	4.04	0.704	4.14	0.725	4.89	0.499
27	Language and cultural differences	4.07	0.704	4.31	0.684	4.54	0.529
28	Arbitrary tariff classification and reclassification	3.23	0.705	3.41	0.795	3.55	0.485
29	High tariff barriers	3.23	0.652	3.23	0.655	3.55	0.455
30	Inadequate property right (e.g. copyright)	4.21	0.827	4.33	0.825	4.46	0.528
31	Restrictive health, safety and technical standards	4.24	0.812	4.23	0.805	4.49	0.543

**Table 3** Kendall’s coefficient of concordance (W)

	Q	Kendall W	DF	Sig.
1st round	32	0.325	31	0.000
2nd round	32	0.472	31	0.000
3rd round	32	0.609	31	0.000

**Table 4** Descriptive of the second survey community

	Educational level				Gender		Total
	Diploma	Bachelor	Master	PhD	Male	Female	
Owner and top managers	6	6	4	0	14	2	16
Senior managers	0	19	29	11	47	12	59
Senior employees	28	53	54	2	99	38	137
Total	34	78	85	13	160	52	212

### 3.4 Confirmatory Factor Analysis of the Conceptual Model of Research

After identifying the most significant barriers to internationalisation, we applied the Factor analysis to recognise and detect factors. By factor analysis, variables are classified into two factors at least. According to this method, each factor can be considered as a hypothetical variable combining several variables that have similarities in appearance (Rezaei et al. 2020). The factor analysis method facilitates analysing by data reduction and detects structure by measuring the validity and reliability of the questionnaire. In other words, the research variables are restricted by two or more categories based on their common characteristics, and these categories are called factors, and the relationships between the factors are obtained; in each factor, the relations between its variables are calculated, and ultimately the main objective of the research, which is the relationship between the variables of the research, is calculated. For measuring the validity and reliability of the questionnaire, factor analysis identifies whether the items are placed inside the factors (Bandalos and Finney 2018).

Factor analysis approaches can be divided into two general categories: exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). In this study since we have already determined the structure of the factors, therefore, the CFA analysis is used (Sadeghi and Biancone 2018). The most important goal of confirmatory factor analysis is to determine the adaptability of the predefined conceptual model with a set of observed data. In other words, confirmatory factor analysis seeks to determine whether the number of measured variable loads on these factors corresponds to what was expected based on the theoretical model.

### 3.5 *Goodness of Fit*

In a general description, by the goodness of fit, the researcher can find how well its model fits a set of observations. These measures typically indicate the discrepancy between observed values and the values expected under the designed model in the survey (Marsh et al. 2005). It should be noted that there is no general agreement about these tests and several indicators are used to measure model fit. Usually, three to five indices are sufficient to confirm the model. Some of the goodness of fit indexes are the chi-square test ( $\chi^2/df$ ), the goodness of fit index (GFI), the adjusted goodness of fit index (AGFI), and the root mean square error of approximation (RMSEA) (Mulaik et al. 1989). However, the two most prominent indices that are visible in the LISREL output are the chi-square test ( $\chi^2/df$ ) and the RMSEA.

### 3.6 *Confirmatory Factor Analysis*

To confirm the validity of the questionnaire and the structure and to measure barriers, second-order confirmatory factor analysis has been implemented, and, as mentioned, to measure these 8 factors, 31 items are considered. Table 5 shows the second-order confirmatory factor analysis, while Table 6 presents the fitness indices.

According to Table 5, since the path coefficient and t values for all factors exceed at the level of  $p < 0.05$ , it is found the correlations are significant ( $p < 0.05$ ) and positive.

## 4 **Results and Discussion**

The CFA outputs show that among the factors of this test, the most important obstacle for the internationalisation of Iranian SMEs is the financial factor (Cronbach's alpha 95%). The second obstacle was marketing-related issues, and informational and environmental are in the next category by  $R^2 = 0.81$ . The results also demonstrate the procedural and tariff and non-tariff are not as important as the other barriers are in internationalisation for SMEs. Despite the increasing role of SMEs in globalisation, the World Trade Organisation (WTO) statistics show a slowdown in internationalisation in developing countries (Jafari-Sadeghi et al. 2020). This downward trend indicates a lack of courage in SMEs to enter international markets. As a result, exploring the reasons and obstacles to the internationalisation of companies has been a fascinating topic for researchers. Informational, financial, marketing, functional, governmental, environmental and

**Table 5** Second-order confirmatory factor analysis

Second-order variable	First-order factors	Items	$\lambda$ Coefficients	$\delta$ (Measurement errors)	t-Value*	R <sup>2</sup>
Barriers	Informational	Q1–Q4	0.90	0.43	7.16	0.81
	Financial	Q5–Q7	0.95	0.33	7.45	0.90
	Marketing	Q8–Q11	0.91	0.47	7.25	0.83
	Functional	Q12–Q15	0.89	0.35	6.90	0.79
	Procedural	Q16–Q19	0.70	0.27	5.94	0.49
	Governmental	Q20–Q23	0.89	0.29	6.88	0.79
	Environmental	Q24–Q27	0.90	0.31	7.14	0.81
	Tariff and non-tariff	Q28–Q31	0.60	0.39	5.41	0.36

\*p < 0.05

**Table 6** Fitness indices

Fit indices	Reference value (good fit)	Model value
$\chi^2/df$	$\chi^2/df < 3$	1.3799
P-value	P-value < 0.05	0.0000
RMSEA	RMSEA < 0.05	0.042
GFI	More than 0.9	0.92
AGFI	More than 0.9	0.91

tariff and non-tariff are some of the main barriers which reduce the firm’s desire to internationalise.

Concerning external-related barriers, in general, the results show internal-related barriers are a more considerable issue for experts as their average of the coefficient is higher than external barriers. According to the resource-based theory, the resources are the key factors for firms in expanding their market into a foreign market. One of these essential resources is financial resources. According to the findings, financial barriers are identified as a significant barrier to SMEs internationalisation by 0.81. This barrier is recognised in financing resources, working capital and insurance cost for internationalisation. Financing is a common considerable issue for SMEs for many centuries. SMEs are faced with this problem from starting out up to growing their business. As the major sources of financing sectors, banks are reluctant to invest in companies due to the lack of adequate collateral and the uncertainty of debt repayment. Besides, the regional and global economic crises impact corporate investment negatively (Arndt et al. 2009). Our findings are consistent with the results of Camra-Fierro et al. (2012); Chandra et al. (2020b); and Rahman et al. (2017). Marketing is another key factor that can hinder the implementation of the international process. Globalisation and international marketplaces have made it easier for everyone to access international markets which simply means companies’ competitions have become closer (Dana et al. 1999). Therefore, they should improve the quality of their products while providing a more reasonable price. In parallel with the

product cost, they also should find the cheapest distribution ways to reduce their overhead expenses. Difficulty in developing new products, lack of competitive price in a foreign market, problems in goods distribution and representation and high transport cost in and to foreign markets are some issues that compose marketing barrier. Our findings are in line with some previous studies (Raymond et al. 2001; Rutashobya et al. 2005; Singh et al. 2010; Roy et al. 2016b). Information is perhaps the most crucial device for firms in internationalisation. Informational barriers, which are categorised as an internal challenge, refer to those problems that are rooted in lack or insufficient information, knowledge and data for analysing and identifying foreign market and customers. According to some studies of barriers to internationalisation, the information plays a vital role in the success or failure of companies on the path to internationalisation (Suárez-Ortega 2003; Pinho and Martins 2010; Kahiya 2018; Felzensztein et al. 2019). Among the external challenges of internationalisation, environmental factors have the highest correlation. Environmental barriers refer to macroeconomic, political, cultural, social and financial constraints that exist regardless of the inherent company's ability for internationalisation which included international sanctions, poor economic conditions abroad, currency fluctuations and cultural and linguistic differences. Environmental problems such as economic and political instability and the global imposed limitation are the major risk for export and international trade for SMEs. In studies which are conducted by Camra-Fierro et al. (2012) and Al-Hyari et al. (2012), the political and economic uncertainty as an environmental issue is an important barrier for SMEs.

SMEs need significant government support to succeed in entering international markets, and the government's lack of attention and incentives has been one of their main obstacles to internationalisation. Governmental barriers are associated with the action and inactions that arise from the economic decisions of home governments and their policies in internationalisation. These barriers are related to unfavourable and restriction rules and regulations. According to Ahmed et al. (2008); Al-Hyari et al. (2012); and Korsakiene (2015) which conducted their studies in Lebanon, Jordan and Lithuania, respectively, lack of government assistance causes a lot of problem for SMEs in internationalisation. It is also argued that the government complex bureaucracy has a positive impact on internationalising the SMEs (Freeman and Reid 2006).

Among internal barriers, the functional problem has the same correlation as governmental has in external barriers. This challenge is related to the insufficiencies of human resource management dealing with the internationalisation process (Boudlaie et al. 2020). Without allocating sufficient time, sources (e.g. expert employees) and energy, SMEs will face a lot of difficulties in their process into international markets. Our results are parallel with some research in considering SMEs' barriers to internationalisation (e.g. Leonidou 2004; Green 2007; Shah et al. 2013; Narayanan 2015; George et al. 2019).

Procedural barriers are associated with the operational aspects of transactions with foreign customers. Internationalisation is affected by procedural challenges such as being unfamiliar with techniques and procedures, failure in communication

and the problem about the slow collection of payments and difficulty in enforcing contracts which finally has a deep impact on export behaviour. Our result shows this barrier is not as important as internal challenges for Iranian SMEs. According to Uner et al. (2013), the procedural barrier is the most important barrier for Turkish SMEs. Roy et al. (2016b) found, for Indian SMEs, that the procedural barrier is the most important obstacle. Based on Mendy and Rahman's (2019) study, legal procedural complexity is known as a factor in the path to internationalisation. Tariff and non-tariff barriers are associated with foreign government policies on exporting and internationalising. High tariff rate, inadequate property rights protection, restrictive rules in health and safety standards, arbitrary tariff classification and high costs of customs administration are some of tariff and non-tariff barriers which impose challenges in internationalisation process for SMEs (Shaw and Darroch 2004; Leonidou et al. 2011). Based on outputs, the Cronbach's alpha for this relationship is the lowest among all analysed barriers.

## 5 Limitations

Interpretation of the findings and conclusions should be made in light of some limitations. Since the challenges for SMEs in internationalization have not been properly studied in Iran, we are limited to examining some parts of barriers which do not cover all aspects of the impact of obstacles on internationalisation. On the other hand, collecting data via the questionnaire has an inherent risk of common method bias. Participants may aim at consistency rather than accuracy, therefore introducing undue variance in the variables. Survivorship bias is another limitation for this research; our sample is limited; thus, by changing the sample size or society, the result may have different outputs. Furthermore, the scope of this research was limited to a two-step method to identify the barriers in internationalization procedures for SMEs. However, for such a complex challenge, we call for more research, which use practical cases to verify and enrich the outcome of this research. In this regard, by using a combined Delphi-CFA method in this research, the identified outcomes could predict the challenges in future studies in internationalization and demonstrate the significant role of each problem.

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