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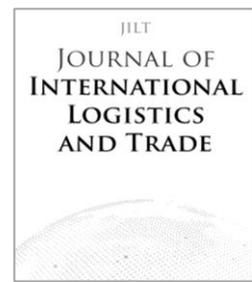
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Exploring the Intention of FTA Utilization by Exporting SMEs: Evidence from South Korea

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ABSTRACT

Considering the proliferation of free trade agreements (FTAs) worldwide, this study develops and empirically tests a conceptual model to explain the impact of CEO attitudes on the intention of exporting firms to utilize FTA preferential tariffs. Based on a survey of 221 exporting small and medium-sized enterprises in South Korea, this study employed partial least squares structural equation modelling to test the hypotheses. Results show that perceived usefulness and organizational learning partially mediate the relationship between CEO attitudes and intention to use FTA schemes. This study deepens our understanding on the firm's internal process for utilizing FTA preferential tariffs.

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1. Introduction

With the proliferation of free trade agreements (FTAs) worldwide, the utilization of FTA preferential tariffs is essential for exporting firms to improve price competitiveness and to enhance export performance (Hayakawa 2015b). It allows them to increase foreign markets and, as a result, benefit from higher export sales (Kawai and Wignaraja 2011). Hence, many firms view FTAs as a positive business opportunity (Takahashi and Urata 2010).

Despite the huge potential benefits, a large number of firms still not only lack understanding of the FTA schemes but are also reluctant to utilize the preferential tariffs in their exporting activities (Hayakawa et al. 2013). In particular, small and medium-sized enterprises (SMEs) are confronted with severe obstacles in using FTA schemes because of resource constraints as well as limited knowledge (Hayakawa 2015a).

The existing literature has identified several variables that affect a firm's FTA utilization (Takahashi and Urata 2010; Kawai and Wignaraja 2011; Hayakawa et al. 2013; Wignaraja 2014). It analyzed the institutional (e.g., preferential tariff margins, rules of origin, administrative costs and procedures, and non-tariff barriers), physical (e.g., firm's age, size, and location), managerial (e.g., export strategy and global supply chain management), organizational (e.g., internationalization and affiliates), and relational (e.g., export channel and transaction relationship) factors.

Although previous research revealed a variety of organizational dimensions to explain the utilization of FTA schemes, it paid scant attention to the roles and attitudes of corporate leaders who make the most significant strategic decisions of an organization. A chief executive officer (CEO) has a great impact on organizational change and the organizational strategy (Lewin and Stephens 1994). Many studies have found that the strategic decisions of small firms are set in motion

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by the leaders' behavior or attitude toward change (Lefebvre and Lefebvre 1992; Musteen et al. 2010). Considering these implications, this study highlights the CEO attitudes to show strategic behavior in exporting activities.

In order to analyze CEOs' roles in, and influence on, adopting new innovative methods for competitive advantage, this research draws on the literature of strategic leadership that emphasized the impact of corporate leaders' attitudes on organizational outcomes (Finkelstein et al. 2009; Boal and Hooijberg 2000). This research develops and empirically tests a conceptual model to explain the relationship between CEO attitudes and the intention of exporting SMEs to utilize FTA preferential tariffs. Although the CEO attitudes may account for a significant portion of the firm's strategic decisions, the existing literature lacks the understanding of the role and influence of CEO attitudes to explain the intention to use FTA schemes.

In addition, we try to clarify how CEO attitudes lead to the utilization intention by proposing two mediation factors: perceived usefulness and organizational learning. This study suggests that the corporate leaders have a significant impact on the perceived usefulness and organizational learning of FTA schemes to adopt the institutional measures. Perceived usefulness is influenced by the characteristics of the top manager (Neufeld et al. 2007). Furthermore, in the context of this research, the utilization intention of preferential tariffs will be dependent on the perceived usefulness of FTA schemes because not all exporting firms benefit from the outcomes of trade liberalization (Ulloa and Wagner 2012). According to Huber (1991), organizational learning is composed of processes related to knowledge acquisition, information distribution, information interpretation, and organizational memory. It is obvious that top managers contribute to the creation of a learning organization (Fernández-Mesa and Alegre 2015). Additionally, an organization with knowledge about FTA schemes is willing to utilize preferential tariffs (Wignaraja 2014).

This study contributes to the literature on international business and trade by demonstrating the structural relationship of three variables (i.e., CEO attitudes, perceived usefulness, and organizational learning) on the intention of exporting SMEs to utilize FTA schemes. This knowledge is important because previous research has offered little empirical evidence of the relationship between a firm's FTA utilization and the top manager. Moreover, we show how CEOs indirectly influence the utilization intention of preferential tariffs through perceived usefulness and organizational learning. This is the first empirical research that examines the underlying mechanisms of how exporting SMEs create the intention for using FTA schemes.

The rest of this paper is structured as follows. The next section reviews the relevant literature on FTA utilization of firms. The third section formulates hypotheses based on the conceptual model. The fourth section describes the research methodology, and the fifth section presents the results of the statistical analysis. Finally, the sixth section provides a discussion and draws conclusions.

2. Review of literature on FTA utilization

Although FTAs include various policy fields, tariff liberalization is the most prominent issue of preferential trade arrangements. Therefore, in academic and practical fields, a firm's FTA utilization is defined as a series of procedures using FTA preferential tariffs in the export or import of goods (Kawai and Wignaraja 2011). Using FTA schemes is allowed for firms in order to profit from the benefits, such as lower tariff rates that reduce the purchasing costs of foreign intermediate inputs and wider market access that generates more export sales (Kawai and Wignaraja 2011). Considering the tariff savings, it is expected that the higher the most-favoured-nation rates of duty, the greater the incentive to utilize FTA tariff rates (Hayakawa et al. 2014).

However, there are costs and requirements that act as impediments to FTA utilization (Kawai and Wignaraja 2011). Specifically, exporting firms are required to meet the rules of origin (ROO) of products under each FTA, issue the certificates of origin (COO), and submit the COO to the customs authority. For exporting firms, it is essential to not only understand the complex FTA provisions and tariff concession schedules but also to accumulate knowledge and experience regarding ROOs and COOs (Wignaraja 2014). Therefore, larger firms are more likely to use FTA schemes since they have more financial, physical, and human resources (Takahashi and Urata 2010).

Inevitably, ROO has given rise to concerns over FTA utilization (Hayakawa et al. 2014). ROO is a criterion to distinguish the origin of products, which prevents deceptive trade practices to avoid having to pay customs duties. There are four main criteria for determining the product origin: wholly-obtained or produced, change in tariff classification, domestic or regional value content (RVC), and technical requirement. Hayakawa et al. (2014) showed that restrictive ROOs have a negative effect on FTA utilization. This result implies that complex and strict rules cause the increase of compliance costs for using FTA schemes.

Apart from the restrictiveness of ROOs, FTA utilization is also impeded by administrative burdens and additional costs in the process of issuing COOs (Ulloa and Wagner 2012). For instance, an exporting firm is required to build and operate a dedicated team to deal with the tasks of issuing COOs, a computer system for analysing inputs and production processes, and a verification system for confirming compliance with the ROOs (Kawai and Wignaraja 2011). Furthermore, some firms may need to change supply chain processes in order to issue formal COOs following the FTA rules (Hayakawa 2015a).

With regard to FTA utilization, most studies have focused on firms' internal or external factors affecting costs and

benefits in the economic context. Although more recent studies have examined the influence of top managers and knowledge acquisition capabilities (Park 2015), little is known about the relationship between top managers' characteristics and FTA utilization processes. In the remainder of this section, we examine a conceptual framework of the continuous intention of exporting SMEs to use FTA schemes through a theoretical and practical exploration.

3. Theoretical framework and hypotheses

3.1 CEO attitudes and utilization intention of FTA schemes

Hambrick and Mason (1984) argue that organizations are reflections of top managers' cognitions and values. This means that the specific knowledge, experience, and preferences of leaders influence not only the assessment of surrounding circumstances, but also the strategic choices they make (Boal and Hooijberg 2000). In line with the upper echelons theory (Hambrick and Mason 1984), a large number of literature has suggested that the values and beliefs of leaders are a critical factor in shaping the organization as leaders may imprint their own values into the design of the organization (Lewin and Stephens 1994). Particularly, in the case of SMEs, evidence has shown that CEOs or founders shape their corporations according to their own preferences (Lewin and Stephens 1994).

Among the various characteristics of CEOs, the underlying attitudes have a profound influence on organization design and strategy (Musteen et al. 2006). Lewin and Stephens (1994, p. 189) define attitudes as "enduring psychological properties of the individual: i.e., characteristics that are relatively stable across time and situation." According to Musteen et al. (2010), organizations managed by CEOs with more liberal attitudes toward change tend to adopt prospector strategies that pursue high levels of exploration to develop innovations. Empirical results have shown that the psychographic characteristics of CEOs affect corporate innovativeness in accordance with demographic features (Lefebvre and Lefebvre 1992).

In the context of international business, a CEO is one of the key factors that explains export performance (Sousa et al. 2008). Fernández-Mesa and Alegre (2015) found that CEO attitudes toward entrepreneurship enhance the export intensity of SMEs. Likewise, FTA utilization was also influenced by CEOs' entrepreneurial orientation (Park 2015) and export commitment (Lee and Yang 2016). Following the theory of planned behaviour, this study considers attitude as "the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question (Ajzen 1991, p. 188)." CEO attitudes toward behaviour have a significant influence on intention (Ajzen 1991). Considering the role and influence within the firms, CEO's positive attitudes toward FTA utilization may increase the intention of exporting SMEs to use preferential tariff schemes. Thus, the following hypothesis is proposed:

H1: *CEO's positive attitudes increase the intention of exporting SMEs to utilize FTA schemes.*

3.2 Mediation effect of perceived usefulness

The technology acceptance model (TAM) suggests a theoretical framework to investigate an individual's behavioural intention to use a technology (Davis 1989). The model posits that usage intention is determined by the beliefs a user holds about its perceived usefulness and perceived ease of use (Davis 1989). The perceived usefulness refers to "the extent to which a person believes that using the system will enhance his or her job performance" (Davis 1989, p. 320). Of the two major beliefs in the TAM, perceived usefulness has been a fundamental driver of usage intention. In fact, given all other things being equal, the easier the system is to use the more useful it can be (Venkatesh and Davis 2000). Perceived usefulness influences the behavioural intention to use a system due to the reinforcement value of outcomes (Igbaria et al. 1995).

In the context of this study, perceived usefulness of FTA can be categorized as benefits of the preferential tariff schemes. Although empirical literature has provided evidence on the positive relationship between FTA and exports (e.g., Baier and Bergstrand 2007), perception of FTA schemes is different for every exporting firm. In exporting SMEs, if the benefits of FTA utilization outweigh the costs, then the firm is more likely to use FTA schemes. However, the present study shows that this positive effect might be directly influenced by the attitudes of CEOs. In fact, TAM presumes a mediating role of perceived usefulness in a complex relationship between external variables and usage intention (Marangunić and Granić 2015). A deeper understanding of the determinants of perceived usefulness would help us to design organizational interventions that would increase the usage intention for a new system (Venkatesh and Davis 2000). According to the advanced TAM proposed by Venkatesh and Davis (2000), perceived usefulness is influenced by several variables. Among them, this study focuses on the role of subjective norm, which refers to the influence of others on the user's decision to use or not to use the system (Marangunić and Granić 2015).

As one of the determinants of perceived usefulness, subjective norm positively affects the perception as well as the intention to use a system through processes of identification and internalization, respectively (Venkatesh and Davis 2000). Identification refers to one's belief that conducting a specific behaviour will enhance social status within an organization because the important referent believes that the behaviour should be conducted (Venkatesh and Davis 2000). Meanwhile,

the internalization process is defined as the incorporation of a referent’s belief into one’s own belief structure (Warshaw 1980). In the context of FTA utilization, CEO attitudes could therefore be considered as an antecedent of perceived usefulness of preferential tariff schemes by exporting SMEs. Considering the above, this research presents the following hypotheses:

- H2:** CEO attitudes positively affect perceived usefulness of FTA schemes by exporting SMEs.
- H3:** Perceived usefulness positively affects the intention of exporting SMEs to utilize FTA schemes.
- H4:** Perceived usefulness mediates the relationship between CEO attitudes and the intention of exporting SMEs to utilize FTA schemes.

3.3 Mediation effect of organizational learning

Moreover, organizational learning provides opportunities for the achievement of the strategic renewal within firms (Crossan et al. 1999). Conversely, a firm’s behaviour change is required for learning (Fiol and Lyles 1985). Firms are expected to learn from not only the direct experiences, i.e., learning by doing and organizational search, but also from the experiences of others (Levitt and March 1988). Considering a dynamic process based on knowledge, the organizational learning process is comprised of four sub-processes: knowledge acquisition, distribution, interpretation, and memory (Huber 1991). As a result, learning enables firms to build a better understanding and interpretation of their business environment and to establish viable strategies (Fiol and Lyles 1985). The ability to learn is directly linked to the performance and long-term success of firms (Argote and Miron-Spektor 2011).

The literature on organizational learning has grown exponentially for decades (Fiol and Lyles 1985; Levitt and March 1988; Huber 1991; Easterby-Smith 1997) and has provided meaningful implications in various research fields. For example, Jiménez-Jiménez and Sanz-Valle (2011) show that organizational learning is positively related to innovation and business performance. A number of empirical studies have viewed export performance and internationalization as a process of learning and knowledge accumulation (Sousa et al. 2008; Paul et al. 2017). For SMEs, the organizational learning capability positively influences the innovative performance and export intensity, respectively (Gomes and Wojahn 2017; Fernández-Mesa and Alegre 2015).

Because of the difficulties and complexities of using preferential tariff schemes (Kawai and Wignaraja 2011), FTA utilization can be also understood as a learning process. Hayakawa et al. (2014) suggest that the compliance cost of ROOs decreases when exporting firms gain experience and accumulate relevant knowledge. As a result, the likelihood of using FTA schemes is positively associated with acquiring knowledge about FTAs (Wignaraja 2014). Finally, the present study attempts to uncover the role of organizational learning as a mediating variable of the relationship between CEO attitudes and the intention of exporting SMEs to use FTA schemes. In this context, Vera and Crossan (2004) propose a theoretical framework explaining how strategic leadership of top managers impacts organizational learning. They show how a specific leadership style and mechanisms can improve the development of stocks and learning flows.

Adopting the entrepreneurial orientation perspective, several studies have shown empirical evidence that CEOs have a direct effect on organizational learning, which is considered as a mediator (Wang 2008; Fernández-Mesa and Alegre 2015). Zahra et al. (1999) show that entrepreneurship promotes organizational learning and learning values, such as teamwork or openness. In view of these arguments, this study proposes following hypotheses:

- H5:** CEO attitudes positively affect organizational learning of exporting SMEs.
- H6:** Organizational learning positively affects the intention of exporting SMEs to utilize FTA schemes.
- H7:** Organizational learning mediates the relationship between CEO attitudes and the intention of exporting SMEs to utilize FTA schemes.

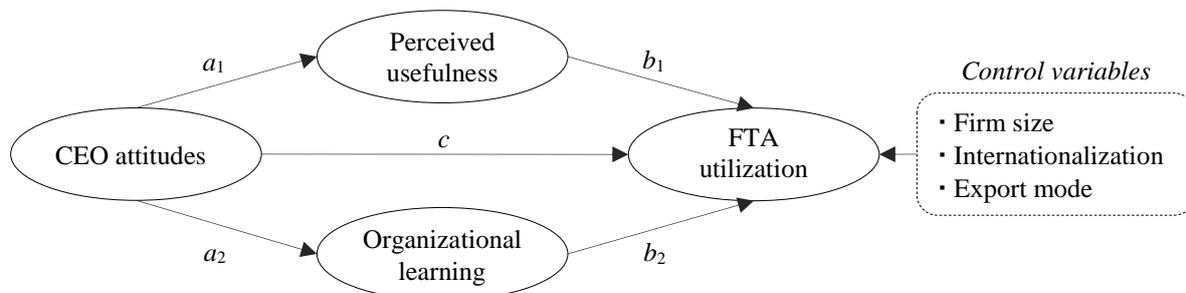


Figure 1. Research model

4. Methodology

4.1. Sample and data collection

This study identified South Korea as a suitable country on which to carry out an empirical analysis on intention to use FTA schemes by exporting SMEs. To strengthen exports, the Korean government has promoted the conclusion of FTAs with major trading partners. As a result, South Korea's FTA coverage ratio (the share of exports to FTA partners out of total exports) stood at over 70% in 2017. In these circumstances, FTA utilization is essential for South Korea's exporting companies, as it can secure tariff savings, foreign market access, and export expansion.

This study used primary data collected from South Korean manufacturing exporting SMEs. A sample of 2,500 firms operating in various sectors was created via systematic random sampling using Korea Strategic Marketing Tool Professional 2016, a comprehensive database on South Korean companies, provided by Korea Contents Media. The data were collected through a survey using a structured questionnaire.

Before the main survey was conducted, an exploratory research was carried out in order to refine the items. First, face validity was assessed by a panel of experts with knowledge of and experience in using FTA schemes, including academic researchers, government officials, and businesspeople. Second, a pre-test was conducted on five firms in order to ensure that the questionnaire items were fully understandable in the context of FTA utilization by exporting SMEs.

To ensure survey quality and reliability, trained surveyors contacted each firm by phone or e-mail, explained the purpose of the study, and filled out each questionnaire. Respondents were ensured anonymity, and their participation was voluntary. The survey was restricted to respondents with more than two years of experience in an export business. Data collection was conducted between February 21 and March 3, 2017. Of the 2,500 firms initially contacted, 221 respondents completed the questionnaires fully, yielding a response rate of about 9%.

The responding firms operated in 11 different industries: chemistry (33 firms, 14.9%), steel and metal (24 firms, 10.9%), textile, garment and leather (23 firms, 10.4%), machinery and equipment (20 firms, 9.1%), food and beverage (15 firms, 6.8%), rubber and plastics (13 firms, 5.9%), electronics and communications (11 firms, 5.0%), electricity (eight firms, 3.6%), paper and wood (6 firms, 2.8%), motor vehicles (2 firms, 0.9%), and other industries (66 firms, 29.9%). Table 1 presents the characteristics of the sample firms.

Table 1. Sample characteristics ($n=221$)

Number of employees	<i>n</i>	%	Annual sales (billion won)	<i>n</i>	%
< 50	12	5.4	< 50	9	4.1
50~100	71	32.1	50~100	21	9.5
100~200	90	40.7	100~500	101	45.7
200~300	37	16.7	500~1,000	47	21.3
300 or more	11	5.0	1,000 or more	43	19.5
Share of exports in sales (%)	<i>n</i>	%	Number of years in exporting	<i>n</i>	%
< 5	33	14.9	< 5	26	11.8
6~10	28	12.7	6~10	87	39.4
11~25	44	19.9	11~20	60	27.1
25~50	51	23.1	21~30	30	13.6
51~75	31	14.0	35 or more	16	7.2
75 or more	34	15.4	Non-response	2	0.9

4.2 Measures

The four key constructs of this study are CEO attitudes, FTA utilization intention, perceived usefulness, and organizational learning. All the constructs were measured by reflective items, except the controls, using a five-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (5). All the items were modified to fit the context of this research.

This study's "CEO attitudes" construct is a new measurement. Two studies, Kim and Chung (2013) and Lee and Yang (2016), are used as sources to establish the CEO attitudes scale, which consists of three items. While previous research on FTA utilization has often relied on secondary data (e.g., utilization ratio in importing) or binary measures (e.g., utilization experience), this study emphasizes intention to use FTA preferential tariffs. FTA utilization intention consists of three items derived from Joo et al. (2016) and literature on the TAM (Davis 1989). The perceived usefulness scale was also derived from literature on the TAM (Davis 1989) and was adjusted to fit the context of FTA. Following previous research (Kawai and Wignaraja 2011; Park 2015), this new scale includes the major expected effects of FTAs, such as enhancing price competitiveness, increasing export performance, improving foreign business environments, and enlarging foreign markets. Based on the theoretical literature (Huber 1991; Argote and Miron-Spektor 2011) and empirical research (Jerez-Gomez et al. 2005; Lloria and Moreno-Luzon 2014), this study conceived its organizational learning scale in terms of the learning process. Although previous research has often measured organizational learning as a binary variable indicating whether a firm has the knowledge necessary to use FTA schemes (Kawai and Wignaraja 2011; Wignaraja

2014), this study adopted a reflective measurement approach using four items modified to fit the context of FTA utilization.

This study included three control variables: firm size, internationalization, and export mode. Firm size was measured as the number of regular employees. Previous studies have shown that large firms were more likely to utilize FTA schemes (Takahashi and Urata 2008). Internationalization was defined as the share of exports out of total sales (i.e., export intensity) during the previous three years. The evidence has shown that a firm's internationalization has a positive effect on its FTA utilization (Ing et al. 2016), perhaps because a more highly internationalized firm benefits from tariff removal in both its exporting and importing activities. Finally, for export mode, a dummy variable of 0 was input for direct export and 1 for indirect export via intermediaries. Takahashi and Urata (2008) found that a firm with subsidiaries or affiliates in an FTA partner country tended to use preferential tariff schemes.

4.3 Data analysis

As recommended by Hair et al. (2017), this study employed partial least squares structural equation modelling (PLS-SEM) to test the hypothesized relationships because of four reasons. Firstly, the sample is not very large. Secondly, the analysis uses both metric- and quasi-metric scaled data. Thirdly, research model is complex including direct and mediating effects. Finally, the study is an exploratory analysis and focuses on the prediction of a dependent variable. All data were analysed using SmartPLS 3.2.7 (Ringle et al. 2015).

5. Analysis and results

5.1. Assessment of measurement model

Assessing the reflective measurement model requires estimating individual indicator reliability, internal consistency reliability, convergent validity, and discriminant validity (Hair et al. 2017). To evaluate indicator reliability, this study examined factor loadings and their statistical significance levels, obtained by a bootstrapping procedure (5,000 subsamples). As shown in Table 2, all factor loadings are greater than 0.708 on their construct and are significant at the 0.001 level. Thus, all items have loadings above the threshold (Hulland, 1999).

Table 2. Construct measurement summary

Item description	<i>FL</i>	<i>t-value</i>	<i>Alpha</i>	<i>CR</i>	<i>AVE</i>
FTA utilization intention			0.934	0.958	0.883
Our firm intends to utilize FTA schemes	0.946***	101.811			
Our firm is considering using FTA schemes	0.945***	96.492			
When necessary, our firm will use FTA schemes	0.927***	52.722			
Perceived usefulness			0.937	0.955	0.842
Using FTA schemes enhances our price competitiveness	0.897***	38.264			
Using FTA schemes increases our export performance	0.926***	43.375			
Using FTA schemes improves our foreign business environments	0.939***	98.482			
Using FTA schemes enables to enlarge our foreign markets	0.908***	52.069			
CEO attitudes			0.951	0.968	0.911
Our firm's CEO or top manager encourages exports by using FTA schemes	0.951***	72			
Our firm's CEO or top manager is interested in utilizing FTA schemes	0.974***	260.153			
Our firm's CEO or top manager has a positive attitude toward using FTA schemes	0.938***	59.301			
Organizational learning			0.945	0.958	0.821
Our firm periodically collects information and knowledge on using FTA schemes	0.905***	67.629			
Employees actively attend education or seminars related to using FTA schemes	0.877***	42.620			
Our firm seeks advice and consultation from experts on using FTA schemes	0.862***	42.463			
The members of our firm share information and knowledge on using FTA schemes	0.928***	55.634			
Employees store up knowledge and information on using FTA schemes	0.956***	164.066			

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; *FL* (factor loadings); *Alpha* (Cronbach's alpha); *CR* (composite reliability); *AVE* (average variance extracted).

Internal consistency reliability was measured using composite reliability (*CR*) and Cronbach's alpha. Higher *CR* and Cronbach's alpha values indicate higher levels of reliability. The *CR* value should be above 0.7 for all constructs (Bagozzi and Yi 1988). As Table 2 shows, all *CR* values exceed the cut-off criterion.

To assess convergent validity, this study measured average variance extracted (*AVE*), which should exceed 0.5 for all constructs, indicating that 50% of the variance is explained by different reflective items (Bagozzi and Yi 1988). The *AVEs* for all constructs were found to be satisfactory.

Finally, discriminant validity was assessed using the criterion suggested by Fornell and Larcker (1981), which compares the square root of the *AVE* values with the correlations between constructs. For adequate discriminant validity, the square root of the *AVE* for each construct should be larger than its correlation with other constructs. As Table 3 shows, the diagonal elements are greater than the off-diagonal elements in the corresponding rows and columns.

Table 3. Descriptive statistics, correlations, and square root of the *AVE*

	<i>Mean</i>	<i>SD</i>	1	2	3	4	5	6	7
1. CEO attitudes	3.694	1.121	(0.954)						
2. Export mode (binary)	0.300	0.461	0.011	1.000					
3. FTA utilization intention	3.852	1.072	0.717	0.075	(0.940)				
4. Internationalization (ordinal)	3.550	1.616	0.159	0.076	0.046	1.000			
5. Organizational learning	3.307	1.138	0.726	0.030	0.687	0.155	(0.906)		
6. Perceived usefulness	3.323	1.065	0.568	0.055	0.636	0.121	0.527	(0.918)	
7. Firm size (ordinal)	3.840	0.939	0.054	0.137	0.077	0.041	0.006	-0.026	1.000

* The diagonal elements (in bold) are the square root of *AVE* for reflective constructs

5.2. Assessment of structural model

To examine the proposed hypotheses, the structural model was assessed based on the algebraic sign, magnitude, and statistical significance of path coefficients. This study used a bootstrapping technique to generate *t*-statistics and standard errors, which allows an evaluation of the statistical significance of the structural paths (Hair et al. 2017).

Prior to considering the structural model, the variance inflation factor (*VIF*) was calculated to confirm multicollinearity between predictors. All *VIF* values were below 3, indicating the absence of multicollinearity. Next, the study evaluated the predictive power of the structural model as recommended by Hair et al. (2017), using the explained variance of endogenous latent variables (*R*²), effect size (*f*²), and Stone–Geisser’s *Q*².

First, the coefficient of determination was computed: 32.2% for perceived usefulness, 52.7% for organizational learning, and 64.2% for FTA utilization intention (see Table 4). The high *R*² value indicates that the research model has high predictive validity (Hair et al. 2017).

Table 4. Proportion of explained variance (*R*²) and Stone–Geisser’s *Q*²

	<i>R</i> ²	<i>CV-C Q</i> ²	<i>CV-R Q</i> ²
CEO attitudes		0.703	
Perceived usefulness	0.322	0.669	0.254
Organizational learning	0.527	0.680	0.401
FTA utilization intention	0.642	0.659	0.527

* *CV-C* (Cross-validated communality); *CV-R* (Cross-validated redundancy)

Second, this study calculated the effect size for each relationship in the model. Effect sizes *f*² of 0.02, 0.15, and 0.35 are regarded as indicating weak, moderate, and strong effects, respectively (Cohen 1988). The results show medium effect sizes for CEO attitudes (*f*² = 0.143), organizational learning (*f*² = 0.107), and perceived usefulness (*f*² = 0.156) on FTA utilization intention, while CEO attitudes have moderate and strong effects on organizational learning (*f*² = 1.112) and perceived usefulness (*f*² = 0.475), respectively (see Table 6). All control variables were shown to have a low effect on FTA utilization intention.

Third, Table 4 shows the Stone–Geisser’s *Q*² statistic, the cross-validated redundancy index for the endogenous variables. The results are 0.254, 0.401, and 0.527 for (respectively) perceived usefulness, organizational learning, and FTA utilization intention. These results indicate that the endogenous constructs all have sufficient predictive relevance because all *Q*² values are greater than zero (Chin 1998).

In addition, this study assessed the goodness-of-fit for the research model by examining the standardized root mean square residual (SRMR). The lower the SRMR, the better the model fit. The study’s SRMR value of 0.052 indicates a good model fit, as it is below the common cut-off value of 0.08 (Hu and Bentler 1999).

Table 5 indicates the total effect (*c*) of CEO attitudes on FTA utilization intention without any influence and the direct effect of CEO attitudes on FTA utilization intention as the sum of the direct (*c*′) and indirect (mediating) effects. Specifically, *c*′ represents the effect of CEO attitudes on FTA utilization intention after mediating variables are controlled for: perceived usefulness (*a*₁*b*₁) and organizational learning (*a*₂*b*₂).

Table 5. Summary of mediating effects (Total effects)

Total effect		Direct effect		Indirect (Mediating) effects			<i>VAF</i>
Coefficient (<i>c</i>)	<i>t</i> -value	Coefficient (<i>c</i> ′)	<i>t</i> -value	Point estimate	95% Confidence interval		
					Lower	Upper	Supported
<i>c</i> = 0.728***	18.446	<i>c</i> ′ = 0.349***	4.856	<i>a</i> ₁ <i>b</i> ₁ = 0.167***	0.101	0.311	Yes
				<i>a</i> ₂ <i>b</i> ₂ = 0.212***	0.095	0.250	Yes

p* < 0.05; *p* < 0.01; ****p* < 0.001; Bootstrapping based on 5,000 resamples; *VAF* (Variance accounted for)

The results show that CEO attitudes have a significant total effect on FTA utilization intention (*c* = 0.728; *p* < 0.001). When the two mediators in the model were included, the path coefficient (*c*′ = 0.349; *p* < 0.001) was still significant

(direct effect), which confirms partial mediation. Hence, this study found evidence that CEO attitudes positively impact FTA utilization intention, supporting *H1*. This result also shows how the direct effect of CEO attitudes on FTA utilization intention decreases when perceived usefulness and organizational learning are included.

To test *H4* and *H7*, this study assessed the significance of the indirect effect using bootstrapping procedures. The indirect paths via perceived usefulness ($a_1b_1 = 0.167$; $p < 0.001$) and via organizational learning ($a_2b_2 = 0.212$; $p < 0.001$) were significant, indicating that perceived usefulness mediates the relationship between CEO attitudes and FTA utilization intention, supporting *H4*. The result also indicates that organizational learning acts as an important mediator of the effect of CEO attitudes on FTA utilization intention. This result supports *H7*.

To determine the magnitude of this indirect effect, this study calculated the variance accounted for (*VAF*) index (Hair et al., 2017), which represents the size of the indirect effect in relation to the total effect. A *VAF* value of 52% indicates that more than half of the total effect of CEO attitudes on FTA utilization intent is explained by the indirect effect.

Overall, this study shows that, of the eight direct relationships, six are statistically significant (see Tables 5 and 6). In line with previous research, this study found evidence that CEO attitudes are positively related to both perceived usefulness ($a_1 = 0.568$; $p < 0.001$) and organizational learning ($a_2 = 0.726$; $p < 0.001$). These findings mean that CEOs and top managers not only play an important role in promoting a positive perception of FTA schemes but also contribute to a firm's efforts to accumulate knowledge regarding FTA schemes and utilization. These results support *H2* and *H5*.

Table 6. Effects on endogenous variables (Direct effects)

Relationships	Direct effects	<i>t</i> -value	95% Confidence interval		f^2	Supported
			Lower	Upper		
CEO attitudes						
CEO attitudes → Perceived usefulness (a_1)	0.568***	10.271	0.445	0.667	0.475	Yes
CEO attitudes → Organizational learning (a_2)	0.726***	17.343	0.641	0.797	1.112	Yes
Perceived usefulness						
Perceived usefulness → FTA utilization intention (b_1)	0.295***	4.599	0.175	0.422	0.156	Yes
Organizational learning						
Organizational learning → FTA utilization intention (b_2)	0.292***	3.922	0.133	0.426	0.107	Yes
Control variables						
Firm size (ordinal)	0.062	1.436	-0.016	0.137	0.010	No
Internationalization (ordinal)	-0.097*	2.177	-0.184	-0.009	0.025	Yes
Export mode (binary)	0.045	1.141	-0.032	0.127	0.005	No

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; Bootstrapping based on 5,000 resamples

The study's data support *H3*, which predicts that perceived usefulness positively affects FTA utilization intention ($b_1 = 0.295$; $p < 0.001$). Perceived usefulness was found to play an important role as an antecedent to FTA utilization intention. These results suggest that a firm's intention to use preferential tariffs might depend on how useful the firm perceives FTA schemes to be. Thus, organizational attempts to enhance FTA schemes' perceived usefulness will be worthwhile, as this may increase intentions to utilize the schemes.

Hypothesis 6, which predicts that organizational learning is positively related to FTA utilization intention, is supported by the data ($b_2 = 0.292$; $p < 0.001$). This result is also meaningful since learning firms are better prepared to improve the abilities and capabilities required to use FTA schemes. Throughout the learning process, SMEs reinforce their existing knowledge and try to utilize the preferential tariffs under FTAs.

To assess the nomological validity of the model, this study controlled for the possible effects of firm size, internationalization, and export mode. Unlike the findings in previous studies, firm size and export mode were found to have no significant impact on FTA utilization intention. This result indicates that only internationalization level has a (low) significantly negative effect ($\gamma = -0.097$; $p < 0.05$), suggesting that more highly internationalized SMEs are reluctant to use FTA schemes in their exporting activities.

6. Discussion and conclusions

As the number of FTAs increases, utilizing their preferential tariff schemes becomes increasingly key for exporting SMEs because this strategy allows them to profit from higher export sales, including more foreign business opportunities. While examining how firms are using FTA schemes more actively in their exporting activities, a research stream has been exploring the internal and external factors affecting FTA utilization. This study has contributed to knowledge of the synergistic effects of CEO attitudes, perceived usefulness, and organizational learning in the context of firms' FTA utilization by empirically testing the literature's assumptions.

6.1. Theoretical implications

This study revealed the role of CEOs in the FTA utilization intent of exporting firms and supported the argument that

perceived usefulness and organizational learning mediate the relationship between CEO attitudes and intention to use FTA schemes. A firm's internal processes can thus be assumed to play a distinctive role in FTA utilization. However, the research on this topic has paid little attention to this issue, focusing instead on external factors such as the restrictiveness of ROOs. Researchers should take account of the influence of CEOs and top managers in their conceptual and empirical models. It should also be considered that CEO's positive attitudes have a strong impact on the organizational learning required for FTA utilization.

More specifically, this study made the following theoretical contributions. First, by focusing on the role and influence of CEOs or top managers, the study shows that CEO attitudes enhance intentions to use FTA schemes by exporting SMEs. While a small number of studies have examined the importance of leaders for FTA utilization (Kim and Chung 2013; Lee and Yang 2016), they have not distinguished between usage and intention to use. This study fills that gap by showing that leaders' attitudes are positively related to usage intention.

Second, this study found that perceived usefulness partially mediates the link between CEO attitudes and FTA utilization intention. Notably, this finding suggests that CEO attitudes can improve usage intention both directly and via enhanced perceptions of preferential tariff schemes. This result implies that CEOs or top managers should take action to enhance their firms' perceptions of FTA schemes' usefulness.

Third, this study confirmed that, as expected, the relationship between CEO attitudes and FTA utilization intention is partially mediated by organizational learning. Previous studies have suggested the importance of knowledge and human capital (Wignaraja 2014). This study's findings contribute to previous research not only by highlighting the dynamic learning process but also by explicitly examining the mediating effect of organizational learning. This study also found evidence that CEO attitudes are an important antecedent of organizational learning in FTA utilization.

6.2. Practical implications

Concerning practical implications, the study's findings reinforce the critical role of organizational learning in the preferential tariff usage of exporting SMEs. Considering the difficulties of using FTA schemes, firms must accumulate expertise and knowledge regarding ROOs and COOs. However, employees do not participate in learning activities spontaneously, despite the various educational and training programs available from public and private agencies (Song and Kuno 2015). Moreover, most employees tend to avoid taking responsibility for tasks relating to issuing COOs because it requires them to constantly obtain knowledge and information and to closely collaborate with other firm members (Song and Kuno 2015). To ensure that FTA schemes are used consistently and properly, CEOs and top managers should not only encourage employees to attend learning activities but also allocate the resources needed to reduce the workload of the staff responsible for the FTA file.

The results of this study also provide implications for policymakers with regard to the enhancement of FTA utilization and exports. Though government officials tend to expect the formation of FTAs to increase exports (Song 2017), many exporting firms are still not aware of the advantages of FTAs' preferential tariffs. The study's findings show that the perceived usefulness of FTAs is not generated automatically but, rather, is positively associated with leaders' attitudes. Policymakers therefore need to encourage CEOs and top managers to develop business models utilizing FTA schemes. The greater firms' FTA utilization, the greater the possibility of export enhancement.

6.3. Limitation and future research

Although this study provided some insights into the FTA utilization of exporting SMEs, it has several limitations that must be addressed in future research. First, this study did not examine the degree to which usage intention leads to actual usage behaviour (i.e., the frequency or ratio with which FTA COOs are issued during exporting activities). Despite the difficulties of surveying and data collection (Wignaraja 2014), future studies should determine the interactions between intention and behaviour in the context of FTA utilization.

The second limitation is related to the sample. This study used survey data from exporting SMEs in South Korea. To test the robustness of the model's results, a larger sample that includes exporting SMEs from not only South Korea but other countries as well must be obtained.

Finally, this study did not consider industry characteristics regarding the use of FTA schemes. Some industries are not interested in using preferential tariffs. In the IT industry, for instance, the tariffs for most products have already been eliminated under the Information Technology Agreement of the World Trade Organization. Therefore, future studies need to pay attention to the differences between industries.

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