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Sustaining Small Exporters' Performance: Capturing Heterogeneous Effects of Government Export Assistance Programs on Global Value Chain Informedness

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Abstract: The previous literature extensively highlighted the importance of export promotion programs (EPPs) provided by governments to enhance small- and medium-sized enterprises' (SMEs) export performance. However, the literature still (1) lacks sufficient depth in analysing the way different types of EPPs sustain SME export performance and (2) suffers from the absence of an EPP portfolio that guides an efficient resource allocation for different EPP types. To fill these gaps, our study (1) developed a research model that integrates three different types of EPPs and (2) tested their indirect impacts on sustainable export performance via global value chain informedness, which is a largely ignored but indispensable capability in exporting. Using a partial least-squares equation model (PLS SEM) method to analyze 156 samples collected from 1st of October to 31st of December of 2018 by accessing Korean SMEs' export managers, our model addresses the different roles of EPP types and also the part of the SME value chain informedness that acts as a critical enabler for sustaining export performance. Furthermore, by complementing the PLS SEM with an importance and performance analysis matrix (IPA matrix), we provide an action plan that guides an appropriate resource allocation to different types of EPPs. In theory, we provide an explanation for how different EPPs work for SMEs via the value chain informedness of SMEs for the export performance. We further capture such EPPs operating over the longer term, with a lasting export performance of SMEs so as to supply a sounder theoretical rationale for the EPP provision. The action plan delivers strategic implications for policy makers dealing with export-assistance programs operations. With the importance of global network involvement and communication with foreign partners, the incorporation of value chain informedness uncovers the necessity of interfirm network-focused informedness in international business literature.

Keywords: export promotion programs; government export promotion programs; firm informedness; value chain; sustainable export performance; PLS SEM; small and medium-sized enterprises; SMEs

1. Introduction

Export promotion programs (EPPs) are provided by government bodies to support firms in overcoming export obstacles. With its effectiveness, the role of EPPs in firm export performance has received an increasing amount of research attention [1]. EPPs provide a particularly significant benefit for small and medium-sized enterprises (SMEs). SMEs play a major role in the economic development of most countries. In many countries such as New Zealand and Sweden, SMEs represent the majority of firms regarded as important players in the economic growth [2,3]. In South Korea,

more than 85,000 SMEs are involved in exporting business, and they share more than 35% of the total export volume [4]. The problem in boosting the SMEs' export performance for the national economy is that SMEs are constrained by a lack of experience and limited resources to acquire export-related information, so they are generally exposed to export barriers, such as new market trends, different customers, regulations and fierce competition [5]. They are also less likely to venture into international markets without government support [6–8]. Owing to such insufficient capabilities and resources, external complementary sources of assistance in exporting, namely EPPs, are required for SMEs [1,8–10]. In particular, the effectiveness of EPPs for SMEs' export performance has long been the interest of national governments that need international competitiveness for their economies, because export performance plays an important role for firm survival, profitability and longer-term growth [11]. Even though behavioral variables such as trust, commitment and cooperation were found to be significant factors associated with export performance [12,13], the majority of prior empirical efforts have indicated that EPPs enable firms to acquire relevant information regarding exports market conditions, export processes and possible export partners, thereby improving exporting performance as reflected by the export intensity, profitability and international growth [3,6,8–10,14,15].

However, our understanding of how EPPs enhance SMEs' export performance is still limited. As echoed by Leonidou et al. [1] (p. 1452), research on EPPs “lacks sufficient depth in analysing the link between government assistance and the firm's export behaviour”. As such, scholars have called for detailed empirical research on the influential mechanism of EPPs as it pertains to export performance, especially in the SME context [14,16].

The current study is an effort toward this research direction. In particular, we focus on SMEs' capability to collect and use export information for their export network involvement, namely their value chain informedness. The utilisation of export value chain information regarding local contacts, export networks, potential partners, customers and intermediaries is regarded as one of the critical success factors for exporting firms [1,17,18]. However, there has been a scarcity in research that examines the role of informedness in the firm exporting performance. This is partly based on the biased attention of research concentrating on the direct link between EPPs resulting in the deficits of knowledge required to improve EPPs [19]. To resolve this issue, we theorize that the impact of EPPs on SME exports is mediated by value chain informedness [20,21] and reveal how EPPs support firms in having capabilities to use foreign information within exporting networks. With regards to EPPs' impact analysis, we center that discussion on the fact that EPPs' role in export performance has proliferated while the study of sustainable export performance has had less attention. Many empirical studies have reported a short-term-based internationalisation performance enabled by EPPs, such as export the intensity, growth and number of subsidies [14]. Consequently, the indirect effects of EPPs on sustainable export performance, through value chain informedness, has not been understood and empirically tested via formal mediation testing. By linking EPPs to sustainable export performance through value chain informedness, we capture the roles of EPPs as a resource supplement that enables SMEs to act as a regular player within international markets.

To gain more in-depth insights into the roles of EPPs for SMEs, we complement the existing literature with two supplementary approaches. First, as suggested by Francis and Collins-Dodd [8], past research has either examined specific programs or government programs in general, so there is no literature considering a variety of impact materialisation paths of different EPPs. This is a critical issue in accumulating EPP-related knowledge. Without a proper understanding of the working mechanism of individual EPPs, the operations that fit particular export needs will still be limited. This study thus explores the roles of three EPP types, namely those that are information-focused, those that are operation-focused, and experience-focused EPPs that affect the sustainable export performance of SMEs. Second, despite the extensive literature that addresses the importance of EPPs' effectiveness, there are no attempts to provide actual guidance regarding a resource allocation portfolio that improves the overall EPP performance. With the increasing demand to generate more policy-oriented research regarding EPPs in the international business context [19], a guidance to raise the overall EPP performance will

serve as a more sound rationale for EPP policy makers. To supply such guidance, we assessed the performance levels of each EPP based on their importance. Such importance and performance analysis approaches enabled us to measure whether a certain EPP performs as required in view of its own importance level among different EPPs.

This study is one of very few that examines the variety of roles of EPP programs via firms' value chain informedness within an international setting. With this theorisation, the identification of the underlying mechanism of EPPs' impact on export performance gains a more explicit explanation. Moreover, this study is the first to guide resource allocation across heterogeneous types of EPPs. We expect this work to contribute to a better understanding of EPPs' effectiveness in support SME managers and EPP program operators who seek to develop SMEs with the capacity to create additional value, enhance regularity and establish greater longer-term performance in the international markets.

2. Theoretical Background and Research Framework

To capture how SMEs utilise information provided by EPPs and increase their competitive advantages, this study draws upon a dual-approach thinking [22] that combines internationalisation process theory and the resource-based view (RBV).

The internationalisation process theory was introduced by Johanson and Vahlne [23]. Its primary argument is that the obstacles to internationalisation can be reduced via learning about foreign markets because the accumulation of foreign information is the facilitator of firms' commitment decisions in international activities. By mirroring the evolution of a global market environment toward a web of inter-firm relationships, this theory has been expanded to the export network context [24,25]. Specifically, in their view, market knowledge used in the networks [24,25] has been regarded as a critical enabler of international activities. This is because, with foreign knowledge, SMEs strengthen their network position and enjoy an empowered position that helps them achieve the identification and exploitation of relational opportunities. Johanson and Vahlne [24] summarised this process as: knowledge acquisition in the market; trust-building with trade partners backed by knowledge acquisition and commitment; and, finally, improvement of the network position. Later, to elaborate multinational business enterprises' international behaviors, the content of internationalisation theory was expanded to the dynamic business environment where continuous challenges are provided to international firms [25]. This theory thus offers a process and contents for SME internationalisation within a changing and inter-connected market structure where the firms must acquire and use information within inter-connected relationships. This is consistent with our conceptualisation of the value chain informedness of SMEs. EPPs are designed and provided to indigenous exporting firms to deliver various types of exporting-related knowledge and, in turn, firms are enabled to exploit the market's full export potential [1,26]. As a result, to enter a new market, firms are able to acquire assistant knowledge regarding markets, customers, local intermediaries, regulations from EPPs, etc. (i.e., knowledge acquisition). Supported by the knowledge and information obtained from EPPs, SMEs are able to facilitate value their chain-network involvement by exploring relational opportunities, and then firms are finally able to seek networking opportunities (i.e., a network position) within such relationships. For instance, leveraging these relationships, firms gain experience and knowledge within the relational value chain and are therefore allowed to focus on value-adding activities within the chain [18].

The theory of Johanson and Vahlne [24] suggests a commitment and trust-building process that is used for relationships and knowledge creation within the network. However, it should be noted that the explanation regarding the firm's capacity to use such knowledge is rather implicit. Consequently, we composite the RBV to complement the internationalisation theory. The primary assumption of the RBV is that firms are competitiveness seekers [27,28]. To be competitive, firms possess resources as the basic building blocks to gain a competitive advantage over the longer term. The resources refer to a set of heterogeneous and valuable assets as well as useful capabilities possessed by firms to achieve a competitive advantage; firms need these resources to protect themselves against

imitation and transfer from competitors [29,30] The RBV's framework consists of internal resources for competitiveness that are well-applied to exporting firms that seek resource appropriateness [10], as is the case with this research. Furthermore, it is in line with the conceptualisation of value chain informedness to achieve export competitiveness. This is because value chain informedness is an internal capability that collects and utilises the appropriate information for relational opportunities and knowledge [20,21], and so is expected to reduce information asymmetry and uncertainty, thereby serving to improve export performance with respect to survival, level of commitment, internationalisation and customer satisfaction.

Based on the aforementioned information, we view EPPs as supplying firms with external information resources; the firms then internalise this foreign knowledge to raise their value chain informedness. The outcome of such an information utilisation for networking opportunities will elevate the level of the export performance over the longer term. Figure 1 depicts the proposed research model. It shows how EPPs increase firms' supply chain informedness and also that informedness increases sustainable export performance. The definitions of the key variables and relationships among the variables will be discussed in the next section.

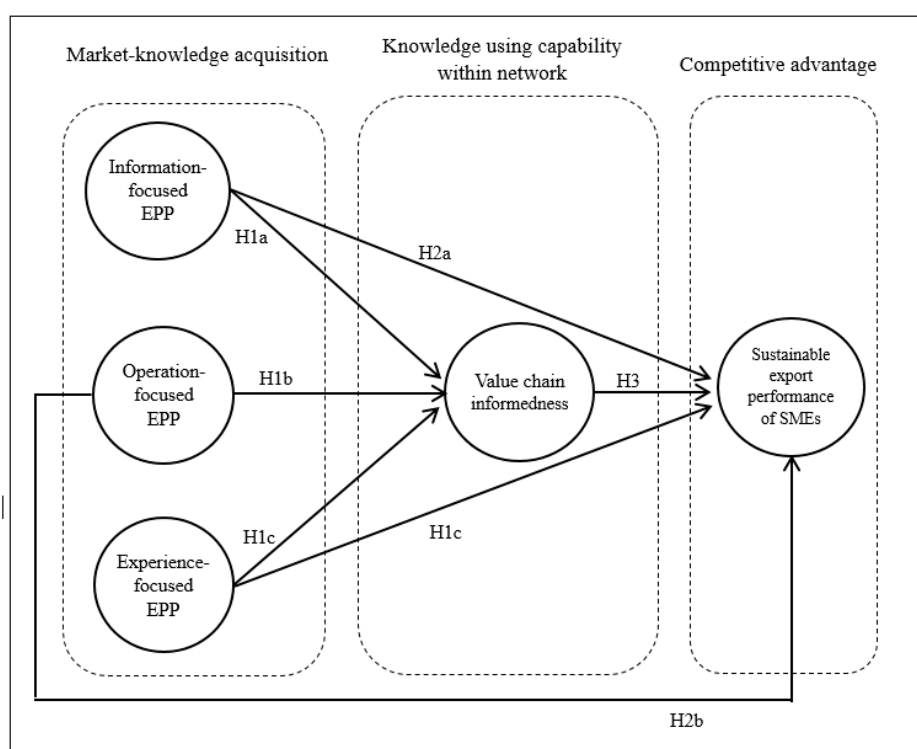


Figure 1. Research model; Source: Authors; **Note:** EPP refers to export promotion programs, SMEs refers to small and medium-sized enterprises.

3. Literature Review and Hypothesis Development

3.1. Government EPPs

The majority of EPP-related research has focused on the means by which the use and awareness of EPPs enhances export performance [19]. Even though the research outcomes are fragmented and inconsistent, there is a large consensus that the impact of EPPs on export performance is positive. Moreover, with the increased amount of information required to adapt to idiosyncratic foreign market conditions, researchers have pointed out that different types of EPPs have emerged and been leveraged [1,14]. Our literature review finds a variety of EPPs and their different roles for exporting firms.

According to Francis and Collins-Dodd [8], the provision of the export information and operational support are two important areas. The informational support includes foreign market research and market entry-related information, export marketing seminars and newsletters, thereby highlighting the importance of foreign information required to engage in export behaviours. On the other hand, operational support, including trade logistics training, consumer marketing assistance, providing consumer contacts and foreign buyer visits, stresses the role of export operational training and participation in export activities. In a similar vein, Haddoud et al. [16] conceptualised two different types of EPPs for SMEs. One is an informational program that covers knowledge obtained from public services. In this program, informational services, such as seminars, workshops, individual trade counselling and foreign language supports, deliver information regarding how to export. The other program is an experiential EPP, which is conceptualised so as to include services such that SMEs receive opportunities to engage in potential markets and clients, covering trade fair participation, trade missions and programmes abroad to identify foreign agents and intermediaries. Leonidou et al. [1] categorised three types of EPPs—information-related, education-related and trade mobility-related EPPs. Although they did not conduct a formal mediating effect analysis, what distinguished their categorisation from others is that they underscored the exporting firms' limited sources, channels, internal capability to acquire and utilise exporting information; they focused on the importance of a diverse and skillful export information provision that may encourage firms to manage heterogeneous uncertainties in a global business context.

To be integrative, we categorised EPPs into three different types, namely information-focused, operations-focused and experience-focused programs based on their own roles in supporting export business activities. In doing so, we complemented and extended the three types provided by Leonidou et al. [1]. Information-focused EPPs refer to a type of EPP that provides export-related information. By emphasising the information-collecting capability of firms, information-focused EPPs deal with foreign market trends, customers, partner firms, countries and exporting skills. Operation-focused EPPs represent programs that support firm managers in acquiring and utilising skills regarding the exporting of process operations, such as managing export regulations, logistics process knowledge and international marketing-related skills. Experience-focused EPPs concentrate on the involvement of firms in the exporting business. One example of an experience-focused EPP could be a trade fair. Trade fairs offer export opportunities and support international relations in new countries by providing an interface where the sellers and buyers communicate; many firms therefore regard them as part of industrial marketing plans [31].

3.2. Firm Informedness from Global Value Chain Perspective

Exploring the factors that increase the level of export performance and SME internationalisation has been one of the fundamental interests of international business researchers. Specifically, information acquisition in the exporting business is becoming common, but critical practices amongst firms with diverse types of information acquisition capabilities, such as internalisation and utilisation, are identified from intra-firm operations and inter-firm communications [1,32].

Several researchers, including Li et al. [33] and Li and Meshkova [34] have argued that informedness is a source of competitive advantage among firms. Informedness refers to the degree to which consumers identify products, services and other attributes in the market [35]. From a service-provision perspective for customers, for instance, selling opportunities are created for consumers when the customer informedness levels are increased when the availability of information in the international market is enhanced [36]. At the firm's level, informedness is used to describe a firm's ability to seek and collect critical information, therefore in turn improving its competitive advantage [20,21]. What is particularly related to this research is the fact that to increase firm competitiveness, firms must raise their level of informedness within a collaborative network. They implicitly highlight the importance of information in a value chain network that can be acquired from value chain participation:

Informed firms know about the resources and competencies of other firms as well, and may wish to engage them in co-production networks through alliances and strategic partnerships. An informed firm will also know about its value centrality in co-production, and about the value-adding capabilities of its business network partners.

—Kauffman et al. [20] (p. 3)

In line with these theories, we propose putting forward the concept of value chain informedness. One representative example of network use in SMEs' internationalisation is their participation in global value chains. The term value chain indicates a globally distributed network of interdependent value-adding firms, potentially including any scale, from multinational companies to SMEs [18]. With this concept we refer to exporting firms as members of a value chain network and especially to their information and knowledge regarding exporting operations [18]. When the value chain is international in scope, the value chain will act as a channel to research global markets and customers. In fact, several researchers have highlighted the importance of information acquisition in international networks [24,37–39], but the concept of the value chain has been implicitly discussed. For instance, Chetty and Agndal [37] conceptualised the social capital, which refers to the ability to acquire resources within a business network. They demonstrated that the social capital affects the internationalisation mode of SMEs. Along similar lines, Agndal and Chetty [2] determined the business relationships that the firm has with its consumers, distributors, suppliers and government bodies. Fuerst and Zetting [40] provided an interpretation of knowledge-creation dynamics that establishes the vigorous characteristics of international relationships. Based on Coviello [41] who developed network dynamics, Fuerst and Zetting identified that different stakeholder interactions create various types of exporting knowledge, so the interaction with trade partners is a strong relationship commitment. In this sense, we ascertain that firms need to develop their information capabilities, namely their value chain informedness, by seeking foreign market and value chain information as a firm-specific resource for competitive advantages [38,42].

3.2.1. The Impact of EPP Adoption on Value Chain Informedness of SMEs

With regards to the information-focused EPP, it was identified that EPP is treated as an information supplement that enables firms to create networking opportunities. Of particular note, the importance of foreign information regarding suppliers, foreign buyers and intermediaries was highlighted by Leonidou et al. [1]. Ling-yee [17] revealed that export supply chain management skills are significant contributors to low-cost and high-differentiation export competitive advantages. In their work, export supply chain management skills had two components—logistics and financing resources that promoted improved value creation activities in exporting. They identified that such information-based skills permit firms to have a multidirectional information flow, technical collaboration and network cooperation. Such export network formations with suppliers and local distributors is in line with the value chain informedness concept that is required in the web of relationships within global markets. In terms of an operation-focused EPP, education and export expertise, along with internal orientation supported by EPPs, were pointed out as critical managerial characteristics for exporting firms. By emphasizing the restricted access to financing experienced by SMEs, Gardó et al. [26] put forth that brand marketing support from public organisations in foreign countries was the most influential support for SMEs. Martine [43] provided more specific survey results. Concentrating on SMEs, they identified that the EPP participation is a facilitator of firm performance, but that prior objectives and experiential knowledge acquisition enabled by communication with potential foreign partners and by regular visits was treated as a factor for firm competitiveness. They observed that such an involvement produced positive outcomes, such as export diversification and experience as well as market language. Their interpretation was that improved competitiveness was enabled by coordination and integration among network partners, thereby implicitly highlighting the role of value chain informedness. Akin to this, Haddoud et al. [16] demonstrated that workshops and seminars, export counselling, language support and the provision of foreign agents were related to

export operations having a positive impact on the quality of the relationship with local and foreign export partners. They took a network-based approach and defined network relationships from a value chain perspective. Based on Felzensztein et al. [44], they argued that the relationship is a relational resource that may take on an intangible form, such as market knowledge, skills and expertise in international markets; consequently, the concept of value chain informedness is innately addressed. Experience-focused EPPs also play a significant role from a value-chain perspective. Measson and Campbell-Hunt [18] established that trade fairs enabled SMEs to enter value chains via the promotion of goods and reputations, market information-seeking and partnership configuration. Furthermore, trade fairs offered network-building opportunities with new partners over time, as firms could build longer-term relationships; hence, trade fairs benefit SMEs by fostering their entry into global value chains. By criticizing the biasedness created by the self-selection of participants for EPPs, Kim et al. [45] sought to determine the impact of EEPs with randomly selected SMEs. They revealed that the information provision by EPPs is effective when firms are equipped with a sufficient level of learning capacity and productivity, so the impact of export information use is positively associated with firm informedness in international settings. Based on the previous discussion, we developed the following hypotheses:

H1. *Government EPP adoption positively affects the value chain informedness of SMEs.*

H1a. *Information-focused EPP adoption positively affects the value chain informedness of SMEs.*

H1b. *Operation-focused EPP adoption positively affects the value chain informedness of SMEs.*

H1c. *Experience-focused EPP adoption positively affects the value chain informedness of SMEs.*

3.3. Export Performance

The most frequently used measures for export performance have an economic nature, so export performance measures normally cover export sales or profits at the firm level [46]. Such financial driven performance measurement can be regarded as an objective method. However, recent studies produced inconclusive results when using financial performance to measure the impact of public financial support for SMEs. On the one hand, researchers found out that financial measurements, such as net profits, return on assets [47] or total assets, total sales and profit/loss [48], are not affected by the provision of the public fund for new SME entrepreneurship. On the other hand, a few researchers (e.g., [49,50]) argued that public financial programs for SMEs have a positive significant effect on SMEs' economic performance. It should be noted that, theoretically, a firm competitive advantage within the RBV is not an end in itself but a means to gain a sustainable, superior long-term performance [17]. However, even though the majority of export performance research takes a RBV, much of the existing literature conceptualises the export performance with a short-term financial perspective such as the total company sales and export intensity [10], or the export profit, export return on investment, and return on export sales [39], as argued by Fu and Wu [51]. To be integrative regarding the impact of public support on export performance, and to address the role of EPPs on sustainable export performance, we adopted an export performance concept which is developed by Diamantopoulos and Kakkos [11] and Durmusoglu's et al. [7].

Diamantopoulos and Kakkos [11] viewed export performance as an integrative and multi-dimensional concept that features time-related performance not only in terms of the operational efficiency along with the positional and financial outcomes; performance in the past, present and future should also be regarded as overall export performance. Durmusoglu et al. [7] provided more specific conceptualisation. They contended that the provision of experiential knowledge contributes to SMEs' stakeholder relationships, strategic value creation and organisational capability goal achievement. To construct an integrative export performance concept and also underscore the importance of a lasting, longer-term perspective in export performance, we incorporated longer-term exporting, value creation in foreign markets and the satisfaction level of exporters into the concept of export performance. This is

consistent with export performance measured in inter-firm international relationship development. As quality export relationships require commitment and longer-term partnerships, export performance and exporter satisfaction were both maintained at high levels [16]. Along the same lines, Ling-yee [17] interpreted export performance as export strategy-oriented objectives determined by export supply chain-management skills, and therefore measured the performance not only with the sales and growth performance but also with the customer value and market diversification accomplishment. In so doing, they extend the concept of export performance as competitive performance and are also able to highlight the role of EPPs as public policy.

3.3.1. The Impact of EPP Adoption on the Sustainable Export Performance of SMEs

According to Francis and Collins-Dodd [8], even though the patterns of EPPs' impact vary by the level of international involvement, the use of EPPs are generally associated with export marketing competency and market diversification. They argued that the role of export information for export knowledge creation is also relevant to the development of value chain informedness supported by information from EPPs. Sousa and Bradley [3] also identified that export assistance from national and international supporting bodies, mainly the information provision for export activity enhancement, affects the export performance of firms. In Ahimbisibwe et al. [52], information and knowledge acquisition was regarded as an important determinant of the export performance of SEMs. In their conceptualisation, the information and knowledge covered not only the customer value, such as the value for customers, customer preferences and needs, service improvement, product distribution dynamics and pricing, but also market-related information, such as regulations, political economies of the foreign market, customer needs, the technical development and competitors. Toften and Hammervoll [42] provided a clear delineation between export information and knowledge for export assistance. In their theory, information resources produced knowledge when individuals process information and make decisions for product-related tasks. Specifically, they proposed that to solve diverse problems in value chain activities, such as customer/market analyses, logistics systems set-ups and regularity issues with customs, direct applications of information to such exporting-related issues are required for export performance-related outcomes. Their work thus strongly indicates the possible impact of an EPP use in export performance. In the Korean context, Choi and Lim [53] identified that a job training related public policy is one of the significant contextual factors which increases SMEs' innovation performance. This led us to propose the following hypothesis, H2:

H2. *Government EPP adoption positively affects the sustainable export performance of SMEs.*

H2a. *Information-focused EPP adoption positively affects the sustainable export performance of SMEs.*

H2b. *Operation-focused EPP adoption positively affects the sustainable export performance of SMEs.*

H2c. *Experience-focused EPP adoption positively affects the sustainable export performance of SMEs.*

3.3.2. The Impact of Value Chain Informedness on Sustainable Export Performance of SMEs

There is growing recognition of the importance of network and value chain perspectives in exporting activities, so export operations are seen as a value chain activity [13]. In Leonidou et al.'s [1] work, firms are encouraged with support from foreign intermediaries and also foreign market information. Such external and network-related stimuli are known as one of the critical determinants of export activity development. In particular, distribution in foreign markets is considered one of the major obstacles to overcome for exporting firms [26]. According to Shamsuddoha et al. [9], the level of cooperation between exporting firms and local distributors is another determinant of export performance, so information regarding potential partners for local logistics, distribution methods and transport lead times should be acted upon. From a supply chain perspective, it is reported that supply chain managers can identify attractive sources of distributors and potential suppliers so as to be able to perform value creation activities to enter and operate within foreign markets. As a

result, firms have better cost or product differentiation advantages, namely a sustained and superior long-term performance over competitors that suffer from a lack of supply chain information [17]. This networking capability was empirically tested by Haddoud et al. [16]. By defining export-related activities as relational resources to internationalise, they argued that the information provided by EPPs can serve as a resource to create networking opportunities with local businesses and foreign buyers. Information shared in supply networks also influences the internationalisation process and performance-related capabilities.

Based on the findings identified earlier, we develop a further hypothesis:

H3. *Supply chain informedness positively affects the sustainable performance of SMEs.*

4. Research Methods

4.1. Partial Least-Squares Structural Equation Modelling with an Importance and Performance Analysis Matrix (IPA Matrix) Analysis

We employed partial least-squares structural equation modelling (PLS SEM) to test the research model in an empirical manner. PLS SEM is known as an appropriate technique for the early stage of theory building and exploratory research that predicts relationships among variables [54–56]. It is known that the difference between exploratory and confirmatory research is sometimes hard to determine, but exploratory research focuses on possible relationships in the most general form and utilises multivariate techniques to identify relationships. In this sense, one does not confirm any possible relationships prior to the empirical analysis, and instead one identifies the nature of the relationships between variables in exploratory research [57]. Such theory-building and exploratory characteristics of the PLS SEM approach encouraged us to use PLS SEM for this study for the following reasons.

On the one hand, the primary objective of this study was to assess the extent to which one part of the research model (EPP use) predicts variable values in other parts of the model (value chain informedness and sustainable export performance). In this model, the measurement models are re-conceptualised to complement existing concepts so that the structural impact paths are newly developed to build a theory. On the other hand, the availability of the IPA matrix is a unique advantage of using PLS SEM for this study. We should note that the extrapolation of test results from PLS SEM to IPA is available for PLS SEM but not for the covariance based SEM (CB SEM) method [58]. This is because the IPA matrix creation is based on one of the key characteristics of PLS SEM, namely the extraction of latent variable scores [57,59]. To develop an action plan that guides an efficient resource allocation based on importance and performance level, we required the IPA matrix. The extrapolation of PLS SEM findings to the IPA matrix is conducted through the steps described subsequently. First, the target construct should be determined as the total effects of the independent variable, and the mediators must be calculated for the target constructs within the causal relationships among the variables. Second, one must compute the importance on the X-axis following the estimation of the direct, indirect and total relationships of the latent variables, which is calculated from the inner and outer coefficient that ranges from 0 to 1.0. Third, the performance needs to be rescaled from 0 to 100 on the Y-axis based on the average values of the latent variable scores. Finally, the scores for the importance and performance of each construct or indicator must be combined in a plot after the application of the bootstrapping technique that assesses the statistical significance of the indicators' importance for the target constructs [57,59–61]. This study used SmartPLS 3.0 software for the PLS SEM analysis and extrapolated the PLS SEM results to the IPA matrix construct operationalisation.

The measurement indicators are adopted from the existing empirical research. The information-focused EPPs were measured through foreign information provision-related indicators, such as the information required for market entry and that regarding foreign partners and marketing/logistics/general information [1,6,11]. The operation-focused EPPs were mainly measured by the provision of management and process-handling focused programs, such as strategy/credit counselling along with export- and process-related document training [6,11,13]. Language was also added to this type as many SMEs are

lacking sufficient communication skills and resources. The experience-focused EPP were dedicated to mission and trade participation provision areas. Trade missions, export conferences, trade shows or exhibitions, and also support from international trade offices from the home country, are included to evaluate this type [1,16] to determine if the actual participation opportunities in the exporting activities are related to the value chain informedness and sustainable export performance. The value chain informedness was assessed by the indicators developed from existing literature [20,21,62,63], by composing firm informedness indicators and firm capabilities in value chain-information use to describe the characteristics of value chain informedness. Specifically, the firm informedness indicators, such as market, customer, competitor and network informedness, were adopted from existing informedness literature [20,21], and the information linkage-use capability in a value chain was adopted from information technology flexibility literature [62,63]. We conceptualised the measurement of the sustainable export performance through multiple dimensions, namely the value-and longer-term-oriented performance and growth performance, as discussed in Section 3.3. In terms of the value and longer-term performance, indicators that sustain the export performance, such as the customer value, reputation, longer-term performance and export diversification were used [1,12,43]. In terms of the performance, we employed a satisfaction level as a measurement scale owing to the small size of the respondents' firms. The satisfactory level of growth in sales, market share, new markets and overall profits were employed to measure the performance of SMEs [1,16]. The measurement items are presented in Table 1.

Table 1. Measurement items.

Measurement Variables (Abbreviations)	Indicators (Abbreviations)	Reference
Information-focused EPP (INEP)	Use of following EPPs:	[1,6,11]
	Foreign market entry information provision (economic, political and market information) (ENTRY INFO)	
	General knowledge on potential foreign partners (PARTNER INFO)	
	International marketing information and methods (MARKETING INFO)	
	Exporting and logistical process information (PROCESS INFO)	
Operation-focused EPP (OPEP)	Export publications and general literature (GENERAL INFO)	[6,11,13]
	Use of following EPP:	
	Export strategy consulting (STRATEGY)	
	Firm credit and financial consulting (CONSULTING)	
	Training programs specialised in exporting processes (PROCESS TRAINING)	
Experience-focused EPP (EXPEP)	Training programs on international documents (DOCUMENT TRAINING)	[1,16]
	Export language counselling (LANGUAGE)	
	Participation in export-related seminars and policy conferences (SEMINAR)	
	Participation in export counselling (EXPORT COUNSELLING)	
	Participation in trade shows/exhibitions (EXHIBITION)	
Value chain informedness (VCINFD)	Participation in trade missions (MISSION)	[20,21,62,63]
	Support from international trade offices (TRADE OFFICE)	
	We have sufficient levels of information capability regarding:	
	Target foreign market status (scale, trend, opportunity) (MARKET INFD)	
	Target foreign market political status (regulations, administrative systems) (POLITIC INFD)	
	Foreign customer (plan, preference, possible order levels) (CUSTOMER INFD)	
	Foreign competitor (COMPETITOR INFD)	
	Market entry and export processes (documentation, customs) (PROCESS INFD)	
SME's sustainable export performance (SUSEXF)	Foreign market logistics processes (transport method, transport process, lead time) (LOGISTICS INFD)	[1,12,16,43]
	Information configuration of potential foreign partnership (POTENTIAL PARTNERSHIP INFD)	
	Information configuration of existing foreign partnership (EXISTING PARTNERSHIP INFD)	
	Customer value (CUSTOMER VAL)	
	Robust reputation amongst customers (REPUTATION)	
SME's sustainable export performance (SUSEXF)	Longer-term growth (GROWTH)	[1,12,16,43]
	Export diversification (DIVERSIFICATION)	
	Satisfaction with overall export sales (EXPORT SALES)	
	Satisfaction with market share (MARKET SHARE)	
	Satisfaction with new market entry (ENTRY SATISFACTION)	
SME's sustainable export performance (SUSEXF)	Satisfaction with overall profit (PROFIT SATISFACTION)	[1,12,16,43]

Note: EPP refers to export promotion programs, SMEs refers to small and medium-sized enterprises; Source: Authors.

5. Empirical Testing and Results

5.1. Data Collection and Demographic Profiles of Respondent Firms

The data collection methods can be divided into probability and non-probability sampling. The method this study used to collect the data falls into the category of non-probability sampling. In most cases, it is rarely possible to collect data from the entire population. This means that researchers must select appropriate data collection methods that make research objectives achievable in an efficient manner under time and budget constraints [64,65]. When the whole population is not completely known, non-probability sampling can be adopted as a practical alternative to probability sampling [64,66] as was the case with this research. On the one hand, it is hard to identify SMEs that have experienced government EPPs from a large pool of firms in disparate geographical areas within a certain region or country. On the other hand, this study required all the respondents to have an adequate level of knowledge and experience in EPP use, level of value chain informedness and sustainable export performance to evaluate every variable in the questionnaire. To acquire credible data, we conducted our survey with firms appearing in the List of Promising Export SMEs published by the Korean SME Export Center as a respondent pool. The Korean SME Export Center is a government-supported institution which is fully dedicated to SMEs' export promotion in South Korea. EPPs provided by the Korean SME Export Center cover international trade fair, online global marketing assistance, exporting consulting, importer credit analysis, foreign market information provision, foreign regulation/standard analysis, etc. Its programs are recognised as well structured and systematic, so diverse types of SMEs benefit from its programs. Moreover, the Korean SME Export Center integrates different export promotion services provided by other government organisations. Consequently, it plays a significant role for Korean exporting SMEs [4]. As the EPP provision was conducted by the Korean SME Export Center and as this center shortlisted the promising firms, we concluded that the firms on the list have a high probability of using EPPs. Prior to the questionnaire circulation, the survey was piloted with six practitioners from several exporting firms. The pilot respondents were asked to examine the contents of the questionnaire and suggest areas needing improvements. To determine if the respondents met the inclusion criteria and assess their competency, an additional formal verification was administered by asking if they had been assisted by EPPs. Only respondents that experienced the three types of EPPs were retained for a data analysis, which was to select the appropriate respondents that were knowledgeable in EPP use for SMEs. A total of 825 questionnaires were distributed from 1st of October to 31st of December, 2018. We used email and fax for the distribution. Finally, 156 responses were collected, reflecting a 19% response rate. The demographic profiles of the respondent firms are found in Table 2. Since we focused on SMEs, we excluded firms with more than 250 employees; therefore, every respondent firm had under 250 employees.

5.2. Common Method Bias and Non-Response Bias Testing

As each questionnaire was answered by a single informant, issues regarding the common method bias should be addressed. To reduce the likelihood of a common method bias, we applied procedural remedies, as suggested in the previous literature [67–69]. We performed two tests to establish if a common method bias was a cause for concern. First, Harman's single-factor test was conducted to determine whether the majority of the variance is explained by a single factor. Second, a non-rotated solution exploratory factor analysis extracted five factors along with an eigenvalue above 1.0, as opposed to a single factor, and they accounted for 70% of the total variance. Moreover, as the first factor (21%) did not account for a majority of the variance, a significant level of common method variance did not appear in the current study [67,68]. As suggested by [70], we also carried out a non-response bias test again, and the last quartile of respondents was expected to be the most similar to the non-respondents because their responses to the questionnaire took the longest time to gather. This implies that the respondents from the last quartile need to be compared with those acquired in the first quartile [70]. We applied two types of non-parametric tests of difference, namely

the Mann–Whitney test and Wilcoxon matched-pairs signed-ranks test, to determine whether the two data samples were different [71]. The test results showed that there was no significant level of difference between the first quartile and last quartile of the samples.

Table 2. Demographic profiles of respondent firms (number of observations = 156).

Company Age			Main Export Item		
Age	Frequency	Rate (%)	Items	Frequency	Rate (%)
1–5 years	35	22%	Electronic	41	26%
6–10 years	52	33%	Machine and commodity parts	32	21%
11–15 years	26	17%	Heavy industry	21	13%
16–20 years	21	13%	Technology and communication items	19	12%
Over 20 years	22	14%	Commodities	17	11%
Total	156	100%	Food ingredients	13	8%
			Chemical ingredients	13	8%
			Total	156	100%
Export Experience			Export Markets (Multiple Choices)		
Age	Frequency	Rate (%)	Age	Frequency	Rate (%)
1–5 years	71	46%	China	100	29%
6–10 years	39	25%	South East Asia	86	25%
11–15 years	25	16%	Japan	73	21%
16–20 years	12	8%	North America	44	13%
Over 20 years	9	6%	Western Europe	14	4%
Total	156	100%	Eastern Europe	12	3%
			Oceania	9	3%
			Africa	6	2%
			Specific emerging economies (Brazil, Russia, etc.)	6	2%
			Total	344	100%

5.3. Measurement Model Analysis

To empirically assess the research model, a two-stage PLS SEM-specific assessment procedure was required. The stages are as follows: (1) an assessment of the measurement model by examining its reliability and validity; and (2) a structural model assessment that investigates the variance explanation of the endogenous construct and predictive relevance [57,59,72,73]. With the measurement model assessment, four types of validity tests were used. They are: internal consistency reliability, convergent validity, indicator reliability and discriminant validity. Table 2 presents the validity test results regarding the measurement models. The internal consistency reliability refers to a form of reliability utilised to establish the consistency of results across measure indicators. PLS SEM employs composite reliability and Cronbach's alpha for the criteria of internal consistency. Composite reliability and Cronbach's alpha values over 0.60 are acceptable in this regard. In terms of the composite reliability, our constructs scored from 0.881 to 0.919, and the Cronbach's alpha scores were from 0.847 to 0.889, as seen in Table 3. Therefore, our values satisfied the threshold.

Table 3. Measurement model analyses (number of observations = 156).

Latent Variables	Number of Indicators	Internal Consistency Reliability		Convergent Validity	Indicator Reliability
		Composite Reliability	Cronbach's Alpha	AVE	Factor Loadings
Information-focused EEP (INEP)	5	0.915	0.883	0.683	0.758 to 0.879
Operation-focused EEP (OPEP)	5	0.898	0.858	0.725	0.744 to 0.850
Experience-focused EEP (EXPEP)	5	0.919	0.889	0.767	0.768 to 0.880
Value chain informedness (VCINFD)	8	0.896	0.867	0.725	0.606 to 0.831
Sustainable export performance (SUEXF)	12	0.881	0.847	0.527	0.490 to 0.764

Note: AVE refers to average variance extracted; Source: Authors.

Convergent validity is used to identify the extent to which an indicator correlates positively with alternative indicators of the same variable. The average variance extracted (AVE) examines convergent validity with a threshold of 0.50 or higher. The AVE values identified in this study ranged from 0.527 to 0.767. The indicator reliability represents how many variations in an item are explained by the constructs. The outer loadings determine the indicator reliability by measuring an item's absolute contribution to its assigned construct. Outer loadings of 0.708 or higher are required. Furthermore, in an exploratory approach, as is the case of this research, a loading higher than 0.4 is also acceptable [74]. In this study, the majority of indicators' outer loading values were higher than 0.708, with some exceptions which are over 0.4 and very close to 0.708; consequently, we kept such items in the research model as their outer loadings meet the threshold. We present the factor loading in Appendix A. Finally, the discriminant validity is used to establish the degree to which a measurement construct is truly distinct from other constructs. The discriminant validity can be examined in two ways. First, as proposed by [75], the square root of the AVE of each construct needs to be greater than its highest correlation with any other variables. As Table 4 shows, all of the square roots of the AVE values meet this threshold. Second, we evaluated the cross-loading, which states that each construct presents a larger variance with its own measures than with other measures. In other words, an indicator's outer loadings must be higher than all of its cross-loadings with other constructs. Our research model meets the cross-loading requirements, as found in Appendix B. We assessed the multicollinearity, as the test results had relatively high correlations among some variables. The variance inflation factor (VIF) scores for all of the measurement variables are at acceptable levels of below 5.

Table 4. Fornell–Larcker criterion analysis (number of observations = 156).

Latent Variables	INFEP	OPFEP	EXPEP	SUEXF	VCINFD
INFEP	0.826				
OPFEP	0.848	0.851			
EXPEP	0.780	0.855	0.878		
SUEXF	0.699	0.705	0.699	0.725	
VCINFD	0.734	0.731	0.691	0.837	0.851

Source: Authors.

5.4. Structural Model Analysis (Hypotheses Testing)

Following the validity tests on the measurement constructs, we performed an assessment of the structured model. Table 5 summarises the structural model tested via a PLS analysis. This table shows the explained variance (R^2), the standardised path coefficient and the t -values produced with the significance level, applying the bootstrapping technique. It also presents the results with and without the mediating effects of value chain informedness to discuss the mediating role of value chain informedness within the relationship between EPP use and export performance over the longer term. With regard to the fully mediated model, the test findings support hypothesis H1a ($\beta = 0.373$, $p < 0.01$), H1b ($\beta = 0.271$, $p < 0.05$) and H1c ($\beta = 0.170$) for the different EPP types. This demonstrates that information-

and operation-focused EPPs are positively associated with SMEs' value chain informedness, while experience-focused EPPs are not. In terms of the direct impact of EPPs on export performance, information- and operation-focused EPPs do not show a direct impact on export performance, i.e., H2a ($\beta = 0.059$) and H2b ($\beta = 0.022$); while experience-focused EPPs had a direct impact on export performance, i.e., H2c ($\beta = 0.185$, $p < 0.1$). Finally, value chain informedness affects sustainable export performance positively; thus, H3 ($\beta = 0.672$, $p < 0.01$) is supported. Figure 2 illustrates the results of the impact path analysis of the fully mediated model.

Table 5. Effects and variance explained for all endogenous variables (number of observations = 156).

Effects on Endogenous Variables with Hypotheses	Path Coefficient β (t-Value)	
	Non-Mediated Model	Mediated Model
Effects on value chain informedness		Variance explained (R^2): 0.580
H1a: INFEP $\rightarrow$ VCINFD		0.373 (2.998 ***)
H1b: OPEP $\rightarrow$ VCINFD		0.271 (2.261 **)
H1c: EXPEP $\rightarrow$ VCINFD		0.170 (1.154)
Effects on sustainable export performance	Variance explained (R^2): 0.557	Variance explained (R^2): 0.722
H2a: INFEP $\rightarrow$ SUSEXF	0.255 (2.263 **)	0.059 (0.610)
H2b: OPEP $\rightarrow$ SUSEXF	0.245 (1.994 **)	0.022 (0.229)
H2c: EXPEP $\rightarrow$ SUSEXF	0.300 (2.692 ***)	0.185 (2.127 **)
Value chain informedness' effects on sustainable export performance		
H3: VCINFD $\rightarrow$ SUSEXF		0.650 (8.245 ***)

Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$ (all two-tailed); Source: Authors.

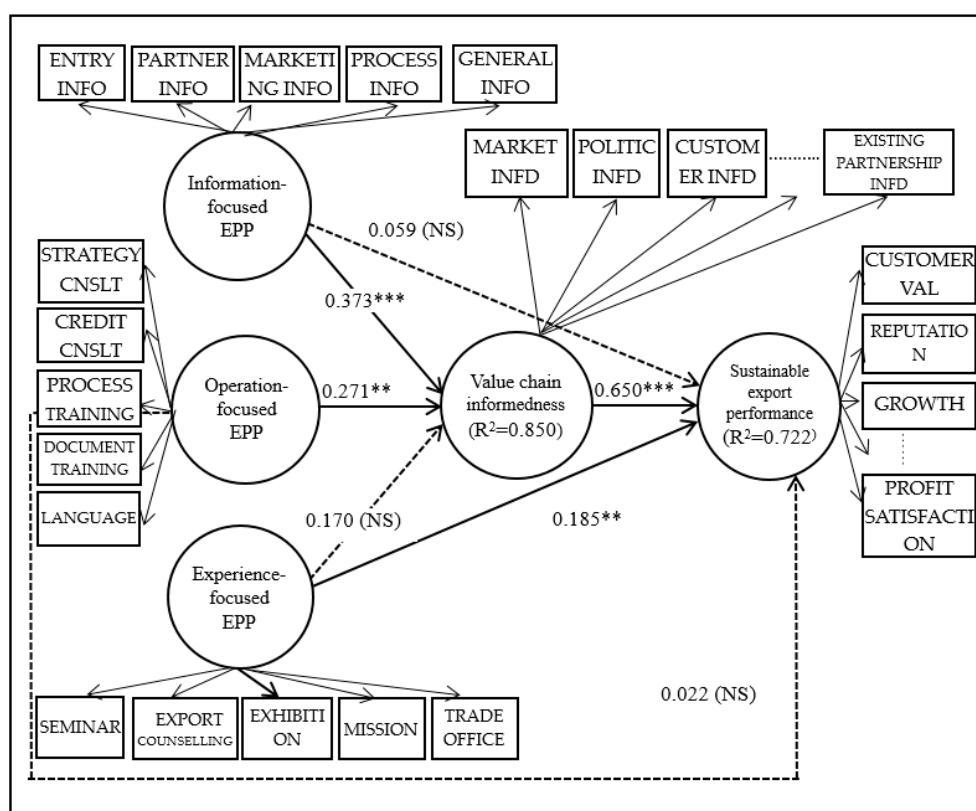


Figure 2. Structural model analysis; Source: Authors. **Note:** EPP refers to export promotion programs, SMEs refers to small and medium-sized enterprises; Note: *** $p < 0.01$; ** $p < 0.05$.

5.5. IPA Matrix Analysis

We exploited the collected data set using PLS SEM, and then extrapolated the analysis to include an IPA matrix formulation by utilising SmartPLS 3.0 software. The scores we computed served as the basis for our analysis. The scores of the importance and performance for each EPP type are presented in Table 6. Experience-focused EPPs had the highest importance score (4.981), while operational-focused EPPs had the second highest (4.925), followed by information-focused EPPs (4.794). This implies that experience-focused EPPs' performance scores should be the highest among the three dimensions. Experience-focused EPPs' performance score was 62.386, which was indeed the highest, while information-focused EPPs' performance scores came in second (60.464) and operational-focused EPPs' performance ranked third (59.885). This indicates that the actual performance scores of operational EPPs and information EPPs are not consistent with their importance levels. As the operations EPPs' importance level was higher than the information-focused EPPs', the operational EPPs' performance should be greater than the information-focused EPPs'. However, in actual fact, it is lower (59.885) than that of the information-focused EPPs (60.464). In other words, the performance of operational EPPs should be enhanced with more resource allocation according to the importance and performance levels. Figure 3 depicts the importance and performance scores of measurement variables.

Table 6. Importance and performance scores of EPPs (number of observations = 156).

Measurement variables	Importance	Performance
INFEP	4.794	60.464
OPFEP	4.925	59.885
PRTEP	4.981	62.386

Source: Authors.

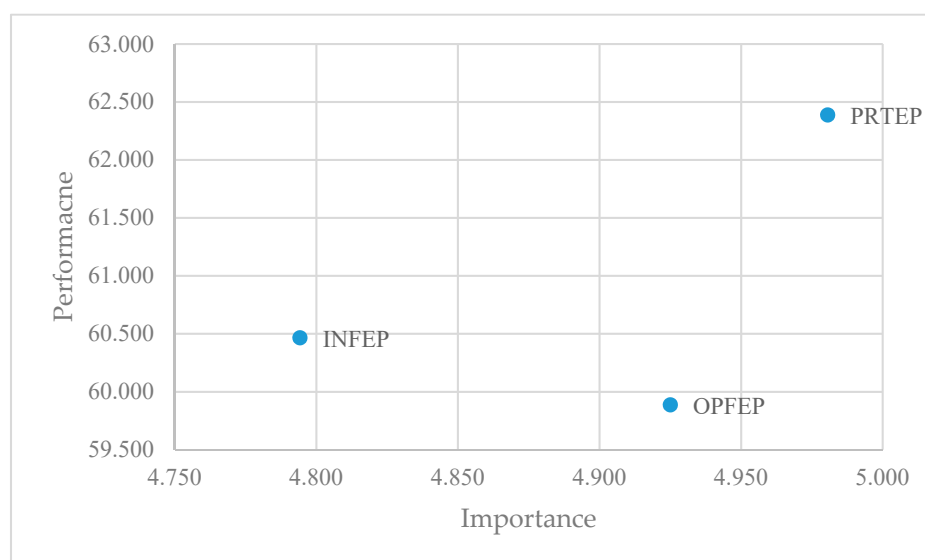


Figure 3. IPA matrix of EPPs; Source: Authors.

To identify which indicators of operation-focused EPPs may require resources to improve performance, the performance of the indicators was analysed. Table 7 lists the importance and performance scores of each indicator for operation-focused EPPs. Overall, every indicator except OPEP3 (training programs specialised in exporting processing) required more resources to enhance performance. In particular, we observed urgent resource requirements for DOCUMENT TRAINING (training programs on international documents). DOCUMENT TRAINING's importance level scores equated to 0.034, so it ranked first among indicators, but its performance had the lowest scores (57.580).

Based on its importance and performance level, we arrived at the idea that the priority in resource allocation should go to DOCUMENT TRAINING. Moreover, other indicators, such as STRATEGY CNSLT (Export strategy consulting), CREDIT CNSLT (Firm credit and financial consulting) and LANGUAGE (Export language counselling), required more resources to improve—their importance level was relatively high but their performance level was low. Figure 4 depicts the importance and performance scores of each indicator.

Table 7. Importance and performance scores of OPEP's indicators (number of observations = 156).

Indicators	Importance	Performance
Export strategy consulting (STRATEGY CNSLT)	0.031	58.471
Firm credit and financial consulting (CREDIT CNSLT)	0.033	59.745
Training programs specialised in exporting processing (PROCESS TRAINING)	0.030	64.756
Training programs on international documents (DOCUMENT TRAINING)	0.034	57.580
Export language counselling (LANGUAGE)	0.026	59.108

Source: Authors.

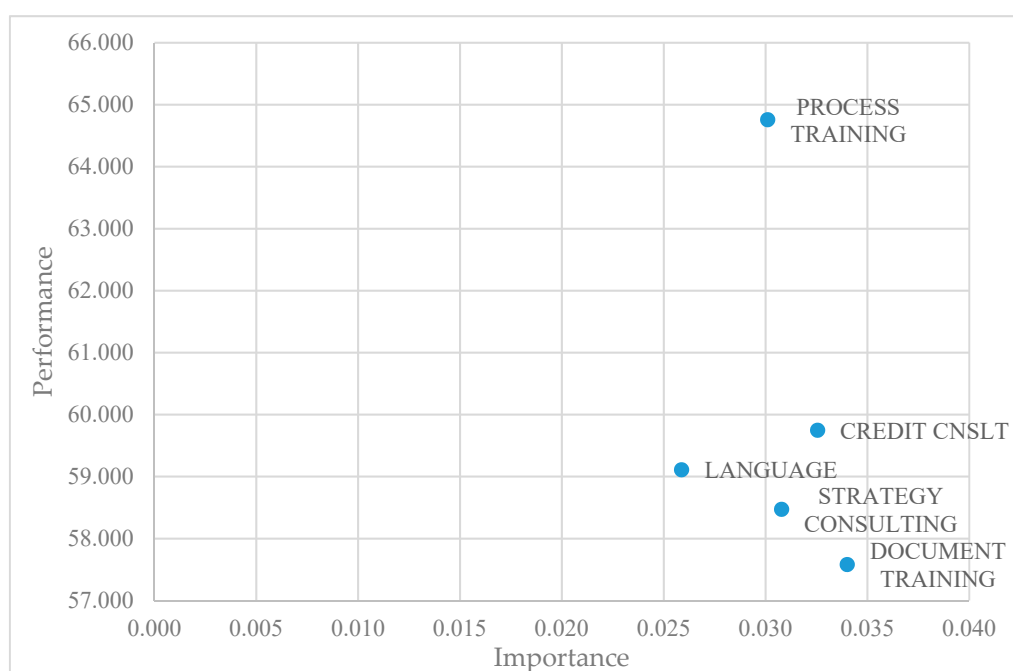


Figure 4. IPA matrix of OPEP indicators; Source: Authors; Note: IPA matrix refers to importance and performance matrix analysis, OPEP refers to Operation-focused EEP.

6. Conclusions and Discussion

6.1. Empirical Findings

Several important findings emerged from this study. The results demonstrated that information-, operation- and experience-focused EPP use is a strong predictor of SME value chain informedness within international settings, explaining 59.7% of variance, thereby indicating a robust prediction accuracy [57,59].

These findings indicate several important contributions to our understanding of the types of EPP for SMEs. SMEs in this study required dense and symmetric information in gathering export-related information, so there should be a proper investigation that reveals the characteristics of the market,

possible network opportunities and entry skills required in markets. This study demonstrates that SMEs are informed about the market, consumers, competitors, possible partners, logistics and export processes through different types of EPPs. By capturing the positive roles of EPPs on value chain informedness, this study clarifies how EPPs support firms by increasing their informedness in global value chain relationships.

Although information-and operation-focused EPPs were associated with value chain informedness, our model showed that they did not affect sustainable export performance directly. However, experience-focused EPPs were associated with value chain informedness and also directly impacted sustainable export performance. This indicates that information-and operation-focused EPPs indirectly affected sustainable export performance. Yet, the scale of indirect impact from experience-focused EPPs was not explicit. In other words, information- and operation-focused EPP informedness requires an intermediary to achieve an impact on export performance while experience-focused EPPs may also need an intermediary support to accomplish a high level of export performance. To clearly address this issue, we tested the unmediated model for a comparison with the fully mediated model (with value chain informedness), as suggested by [76]. The bootstrapping technique provided by SmartPLS 3.0 was applied for a mediating analysis, as recommended by [58,59,77].

The direct impact of information-focused EPPs on sustainable export performance decreased in the fully mediated model ($\beta = 0.255$ to $\beta = 0.059$). Moreover, its impact on value chain informedness ($\beta = 0.288$, $p < 0.01$) and value chain informedness' impact on export performance were significant ($\beta = 0.373$, $p < 0.01$). This implies that information-focused EPPs positively associate with sustainable export performance but only via value chain informedness. In terms of operation-focused EPPs, its direct effect on sustainable export performance becomes insignificant ($\beta = 0.245$ to $\beta = 0.022$) in the mediated model, while the impact path of operation-focused EPPs on value chain informedness is significant ($\beta = 0.271$, $p < 0.05$), as is the effect of value chain informedness on export performance ($\beta = 0.650$, $p < 0.01$).

Thus, the indirect impact of operation-focused EPPs on export performance through value chain informedness was identified. The experience-focused EPPs do not have a mediation impact on export performance. The direct impact of experience-focused EPPs on sustainable export performance decreased in the fully mediated model ($\beta = 0.300$ to $\beta = 0.185$) but was still significant ($\beta = 0.185$, $p < 0.1$). However, its impact on value chain informedness is not significant in the mediated model ($\beta = 0.170$). While comparing the direct and indirect impact of different EPP types on sustainable export performance, we determined that the prediction accuracy of export performance rose from 55.7% to 72.3% in the fully mediated model. Therefore, the proposed mediated model has a strong predictive power with a high level of prediction accuracy [57,59]. Moreover, this analysis shows that value chain informedness affects sustainable export performance significantly, implying that SMEs with the objective of enjoying sustainable export performance must recognise the importance of their informedness to engage in value chains in international settings. This also means that SMEs with a great value chain informedness will benefit from sustainable export performance when export network-relevant information is provided by EPPs.

By conducting a mediating analysis, this research demonstrated that the impact of EPPs on export performance is facilitated by value chain informedness. However, as the mediating effect of experience-focused EPPs is not significant, the role of experience-focused EPPs should be acknowledged. This study also provided evidence that firm informedness in global value chains that cover markets, competitors, logistics and export processes, as well as networking configurations and opportunities, strongly improves sustainable export performance, as 72.2% of the sustainable export performance was explained by value chain informedness. The role of informedness is usually highlighted at the individual level, but as echoed by [20], by revealing the underlying mechanism for how EPPs enhance value chain informedness, the importance of information at the business-network level, especially in the value chain context, was demonstrated.

The second empirical test, using the IPA matrix, showed that an efficient resource allocation among different types of EPPs can enhance the performance and importance for export performance. We tried to identify the gaps between the desired and observed performance based on the importance levels, then noted that more resources could be identified as required. However, the empirical testing via the IPA matrix suggested that the government had invested necessarily in resources and efforts for creating information-, operation- and experience-focused EPPs; consequently, we determined that the government was rewarded through the EPP provision for SMEs. In other words, the resources for EPPs have been well-utilised and mobilised in various areas, which has a positive impact on value chain informedness and sustainable export performance.

6.2. Discussion

6.2.1. Conclusions and Theoretical Implications

To provide a clear understanding of the underlying mechanism of EPPs' effects on SME performance, we complemented the current literature with three different approaches. First, the different roles of various EPPs were identified by categorizing EPPs into three types. As mentioned above, the impact materialisation paths of different types of programs were not identified in the literature. This is mainly because of the current literature's approach in examining a specific EPP's effect on the firm-exporting behaviour. This strongly indicates that the current efforts, mainly on the part of governments, to improve the overall performance of EPPs is not based on the comprehension of how different EPPs work for SMEs; their actions may therefore not feature a proper analysis of the causal relationship between EPP use and export performance, as a result of which this research fills in the current research gap. Our model focuses on the value chain informedness of SMEs within an international setting – a gap severely overlooked by the extant literature. In particular, the existing models fail to articulate a route of casualty from EPPs to the sustainable export performance of SMEs, as a result of which we categorised information-focused, operation-focused and experience-focused EPPs. By taking value chain informedness as a mediating variable, this research established the impact paths of information-, operation- and experience-focused EPPs.

Second, our model tested and clarified where there are both direct and indirect effects on sustainable export performance. The existing literature does not offer integrative results as the roles of informational- and experiential-related EPPs are only identified within the context of partnership quality [16]. There are also a number of models that do not explicitly investigate the link between different EPPs and export performance with a formal mediation-effect analysis [1]. Experience-focused EPPs were treated as a single variable, as a result of which the information- and operation-focused EPPs were neglected from certain lines of empirical research [18]. However, our work confirms that information-focused EPPs that feature a variety of information for possible partners, market entry and marketing skills, affect SMEs' sustainable export performance indirectly, notably via value chain informedness. Operation-focused EPPs that provide export training, counselling and export process education also affect export performance indirectly via value chain informedness. Meanwhile, experience-focused EPPs affect sustainable export performance directly. The identification of each program's working mechanism suggests that the impact of information- and operation-focused EPPs is associated with a firm's value chain informedness; the firm's capability to build, acquire and assimilate foreign network information should account for when EPPs are supplied to firms.

Furthermore, we complement current competitive advantage research in international markets by developing the concept of sustainable export performance. Firms' export survival was a neglected area in the export literature. For this reason, our work included firms' regularity. A firm's capability to collect, translate and assimilate information is one of the critical determinants of firm performance. Hence, the capability to utilise the information in international supply chain networks will facilitate the role of EPPs, increasing sustainable export performance through pursuing new markets, regular profit and the ongoing development of foreign sales. With the importance of network involvement and communication with external partners, the incorporation of value chain informedness uncovers the necessity of supply chain network-focused informedness in the international business literature.

6.2.2. Practical Implication

As mentioned above in Section 2., it is known that the export promotion literature is lacking an integrative approach and fails to provide policy implications, only fitting the theoretical world [16]. However, this research features actual policy implications in two ways. First, we clarified the impact path of EPPs on export performance via value chain informedness. This suggests that if a government is engaged in improving SME export performance with the provision of EPPs, then the policy should consider if the SMEs are ready to absorb the information provided by EPPs to be involved in the value chain of exporting processes. Second, we provide an action plan to enhance the overall performance of EPPs with the combined method of the PLS SEM and IPA matrix. The means by which to allocate export assistance for export firms has been one of the great challenges for researchers [19]. Even though the majority of EPP-related investigations concern the development of EPPs, implicitly offering guidance to program providers regarding resource allocation will improve such a program's performance [9].

6.3. Limitation

The first limitation of this study is the classification of SMEs according to the EPP use. Firms can be segmented based on their degree of international involvement, such as their different needs, stages of internationalisation, obstacles they perceive or face with varying levels of competencies, resources and strategies [8]. If the impact of different EPPs' effects on export performance is dependent on the level of internationalisation, it could be identified by a clustering analysis, and more user-focused resource allocations can be directed for each program. Furthermore, if SMEs can be classified by organisational sizes or the activity sector, this study could generate a differentiated outcome regarding the effects of EPPs on export performance, as shown by Fonseca and Domingues [78] in the management system transition context. Another limitation is that this work tested the roles of different EPPs in a specific country, South Korea. The selection of a specific country can be justified as this study sought a way to implement the IPA matrix and develop a guideline for resource allocation for a single country. However, given its focus on a specific country, the generalisability of this research should be supplemented with additional evidence. This is also related to our non-probability method of sampling. Though appropriate for the exploratory nature of this study, future research should adopt a more rigorous sampling technique in order to enhance the generalisability. We also note that more respondents will garner a greater validity for our research model test results.

Author Contributions: Conceptualization: J.H.H.; Formal analysis: J.H.H. and H.-Y.P.; Project administration: H.-Y.P.; Writing original draft: J.H.H.; Review and editing: J.H.H. and H.-Y.P.

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Conflicts of Interest: The authors declare no conflicts of interest.

Appendix A. Factor Loadings (Number of Observations = 156)

	INFEP	OPFEP	EXPEP	VCINFD	SUSEXF
ENTRY INFO	0.879				
PARTNER INFO	0.862				
MARKETING INFO	0.832				
PROCESS INFOR	0.794				
GENERAL INFO	0.758				
STRATEGY CNSLT		0.787			
CREDIT CNSLT		0.833			
PROCESS TRAINING		0.775			
DOCUMENT TRAINING		0.850			
LANGUAGE		0.744			
SEMINAR			0.768		
EXPORT COUNSELLING			0.809		
EXHIBITION			0.824		
MISSION			0.880		
TRADE OFFICE			0.877		
MARKET INF				0.650	
POLITIC INF				0.827	
CUSTOMER INF				0.831	
COMPETITOR INF				0.606	
PROCESS INF				0.714	
LOGISTICS INF				0.704	
POTENTIAL PARTNERSHIP INF				0.691	
EXISTING PARTNERSHIP INF				0.726	
CUSTOMER VAL					0.747
REPUTATION					0.764
GROWTH					0.767
DIVERSIFICATION					0.697
EXPORT SALES					0.490
MARKET SHARE					0.675
ENTRY SATISFACTION					0.768
PROFIT SATISFACTION					0.754

Appendix B. Cross Loadings (Number of Observations = 156)

	INFEP	OPFEP	EXPEP	VCINFD	SUSEXF
ENTRY INFO	0.879	0.721	0.647	0.622	0.606
PARTNER INFO	0.862	0.748	0.717	0.605	0.579
MARKETING INFO	0.832	0.703	0.641	0.658	0.642
PROCESS INFO	0.794	0.651	0.591	0.627	0.587
GENERAL INFO	0.758	0.685	0.632	0.500	0.443
STRATEGY CNSLT	0.683	0.787	0.610	0.594	0.562
CREDIT CNSLT	0.743	0.833	0.668	0.629	0.583
PROCESS TRAINING	0.638	0.775	0.674	0.579	0.566
DOCUMENT TRAINING	0.701	0.850	0.761	0.608	0.628
LANGUAGE	0.615	0.744	0.711	0.498	0.462
SEMINAR	0.650	0.676	0.768	0.521	0.551
EXPORT COUNSELLING	0.594	0.689	0.809	0.568	0.584
EXHIBITION	0.606	0.695	0.824	0.588	0.540
MISSION	0.694	0.739	0.880	0.601	0.628
TRADE OFFICE	0.700	0.759	0.877	0.598	0.601
MARKET INF	0.446	0.507	0.473	0.650	0.531
POLITIC INF	0.676	0.641	0.607	0.827	0.715
CUSTOMER INF	0.673	0.656	0.631	0.831	0.712
COMPETITOR INF	0.423	0.449	0.443	0.606	0.490
COMPETITOR INF	0.500	0.459	0.428	0.714	0.608
LOGISTICS INF	0.470	0.479	0.454	0.704	0.567
POTENTIAL PARTNERSHIP INF	0.481	0.477	0.431	0.691	0.574
EXISTING PARTNERSHIP INF	0.508	0.516	0.485	0.726	0.598
CUSTOMER VAL	0.568	0.547	0.513	0.675	0.764
REPUTATION	0.452	0.448	0.447	0.523	0.767
GROWTH	0.464	0.453	0.451	0.558	0.697
DIVERSIFICATION	0.295	0.384	0.415	0.419	0.490
EXPORT SALES	0.423	0.436	0.504	0.525	0.675
MARKET SHARE	0.413	0.354	0.371	0.411	0.768
ENTRY SATISFACTION	0.539	0.565	0.488	0.707	0.754
PROFIT SATISFACTION	0.601	0.615	0.569	0.683	0.756

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