

The Evolving Role of Export Promotion Agencies (EPAS) in Internationalization Ecosystems: from governmental support to Pivotal Helix

Papel Evolutivo das Agências de Promoção de Exportações (APES) nos Ecossistemas de Internacionalização: de apoio governamental à Hélice Pivotal

El Rol Evolutivo de las Agencias de Promoción de Exportaciones (APES) en los Ecosistemas de Internacionalización: de apoyo gubernamental a la Hélice Pivotal

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Abstract

Objectives: This research assesses the critical institutional role of export promotion agencies (EPAs) in internationalization ecosystems, focusing on ApexBrasil in the Brazilian context. It examines how these agencies foster sustainable economic growth, improve export competitiveness, and integrate firms into global value chains, aligning with key economic targets of the Sustainable Development Goals (SDGs), including decent work, innovation, and resilience.

Methodology: A qualitative approach combined systematic literature review with content and thematic analysis to explore ApexBrasil's role in Brazilian internationalization ecosystems. Semi-structured interviews with nine ApexBrasil representatives, analysed deductively and inductively, uncovered new macro-categories and empirical dimensions, enhancing theoretical models of EPAs' institutional role.

Relevance /originality: Grounded in the Internationalization Ecosystem Framework (INT-E), the study positions EPAs as "pivotal helixes" within these ecosystems. By analysing ApexBrasil's role in stakeholder connectivity, it offers a novel perspective on how these agencies enhance global trade and advance SDGs by fostering economic growth and industrial innovation.

Main results: EPAs seem to function as a "pivotal helix," playing a central role in optimizing internationalization ecosystems through strategic alliances, knowledge transfer, and local support systems. By extending the original concept of the triple helix and enhancing traditional university-industry-government interactions, EPAs contribute to Sustainable Development Goals (SDGs) by fostering economic growth, driving innovation, and strengthening global trade networks.

Theoretical / methodological contributions: The study introduces the "pivotal helix" concept, emphasizing EPAs' central role. Thematic analysis reveals their evolving institutional functions, providing insights into their impact on internationalization ecosystems and alignment with SDG-related economic goals

Keywords: Internationalization Ecosystem Framework (INTE-E); Export Promotion Agencies; Pivotal Helix; Sustainable Development Goals (SDGs); ApexBrasil.

Resumo

Objetivos: Esta pesquisa avalia o papel institucional crítico das agências de promoção de exportações (EPAs) nos ecossistemas de internacionalização, com foco na ApexBrasil no contexto brasileiro. Analisa como essas agências promovem o crescimento econômico sustentável, melhoram a competitividade exportadora e integram empresas às cadeias globais de valor, alinhando-se a metas econômicas dos Objetivos de Desenvolvimento Sustentável (ODS), como trabalho decente, inovação e resiliência.

Metodologia: A abordagem qualitativa incluiu revisão sistemática da literatura e análise de conteúdo e temática para explorar o papel da ApexBrasil nos ecossistemas brasileiros de internacionalização. Entrevistas semiestruturadas com nove representantes da ApexBrasil, analisadas de forma dedutiva e indutiva, identificaram novas macrocategorias e dimensões

empíricas, contribuindo para o avanço dos modelos teóricos sobre o papel institucional das EPAs.

Relevância / originalidade: Com base no Modelo de Ecossistemas de Internacionalização (INT-E), o estudo posiciona as EPAs como "hélices pivotais." Ao analisar o papel da ApexBrasil na conexão entre stakeholders, apresenta uma perspectiva inovadora sobre como essas agências fortalecem o comércio global e promovem os ODS por meio do crescimento econômico e da inovação industrial.

Resultados principais: As EPAs atuam como "hélices pivotais," otimizando ecossistemas de internacionalização com alianças estratégicas, transferência de conhecimento e apoio local. Ao ampliar o conceito da tríplice hélice e reforçar interações entre universidade, indústria e governo, as EPAs fomentam o crescimento econômico, impulsionam a inovação e fortalecem redes globais de comércio, alinhando-se aos ODS.

Palavras-chave: Framework do Ecossistema de Internacionalização (INTE-E); Agências de Promoção de Exportações; Hélice Pivô; Objetivos de Desenvolvimento Sustentável (ODS); ApexBrasil.

Resumen

Objetivos: Esta investigación evalúa el papel institucional crítico de las agencias de promoción de exportaciones (EPAs) en los ecosistemas de internacionalización, con un enfoque en ApexBrasil en el contexto brasileño. Analiza cómo estas agencias promueven el crecimiento económico sostenible, mejoran la competitividad exportadora e integran a las empresas en cadenas globales de valor, alineándose con las metas de los Objetivos de Desarrollo Sostenible (ODS), como trabajo decente, innovación y resiliencia.

Metodología: El enfoque cualitativo incluyó una revisión sistemática de la literatura y análisis de contenido y temático para explorar el papel de ApexBrasil en los ecosistemas brasileños de internacionalización. Entrevistas semiestructuradas con nueve representantes de ApexBrasil, analizadas de manera deductiva e inductiva, identificaron nuevas macrocategorías y dimensiones empíricas, contribuyendo al desarrollo de modelos teóricos sobre el papel institucional de las EPAs.

Relevancia / originalidad: Basado en el Modelo de Ecosistemas de Internacionalización (INT-E), el estudio posiciona a las EPAs como "hélices pivotales". Al analizar el papel de ApexBrasil en la conexión entre actores clave, ofrece una perspectiva innovadora sobre cómo estas agencias fortalecen el comercio global y promueven los ODS mediante el crecimiento económico y la innovación industrial.

Resultados principales: Las EPAs actúan como "hélices pivotales", optimizando los ecosistemas de internacionalización mediante alianzas estratégicas, transferencia de conocimiento y apoyo local. Al ampliar el concepto de la triple hélice y reforzar las interacciones entre universidad, industria y gobierno, las EPAs fomentan el crecimiento económico, impulsan la innovación y fortalecen las redes comerciales globales, alineándose con los ODS.

Palabras clave: Marco del Ecosistema de Internacionalización (INTE-E); Agencias de Promoción de Exportaciones; Hélice Pivote; Objetivos de Desarrollo Sostenible (ODS); ApexBrasil.

Introduction

Internationalization encompasses the process through which firms extend their operations beyond domestic boundaries to engage with and compete in international markets (Hult, Gonzalez-Perez & Lagerström, 2020). This process entails critical strategic decisions related to resource allocation, adaptation of products or services to meet foreign market conditions, and the management of complexities associated with cross-border regulations and cultural differences. As a driver of economic growth, competitive advantage, and innovation, internationalization facilitates access to new markets, risk diversification, and the leverage of global networks and knowledge flows. It represents a multifaceted phenomenon that intersects with global trade theories, business ecosystem frameworks, and socio-economic development, reflecting the intricacies of the contemporary global economy (Costa, Calazans, Andrade, & Araújo, 2024; Knight & Liesch, 2016).

Research interest in internationalization has notably increased over recent decades, evolving from a focus predominantly on large enterprises to encompass small and medium-sized enterprises (SMEs), thereby contributing to enhanced competitiveness and innovation (Knight & Liesch, 2016; Musso & Francioni, 2015). This area of study is crucial for socio-economic progress, impacting economic growth and employment (Roig, Sun-Wang, & Manfredi-Sánchez, 2020; Van Schijndel, 2019). Moreover, internationalization plays a pivotal role in business ecosystem research, illustrating the interactions between local and global stakeholders (Cha, Kotabe, & Wu, 2023; Hewett et al., 2022).

Exporting represents a fundamental strategy for initiating the internationalization process due to its relatively lower costs and risks compared to alternative entry modes (Ribeiro, Figueiredo, & Forte, 2020). Nonetheless, firms encounter barriers related to finance, bureaucracy, management, and knowledge that can impede internationalization efforts (Costa, Cabral & Araújo, 2023; Leonidou, Paliawadana, & Theodosiou, 2011). In developing countries, export programs are vital for leveraging exports as a mechanism for economic growth (Costa, Cavalcanti, Fernandes & Araújo, 2022; Alcaraz & Zamilpa, 2017). ApexBrasil

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exemplifies this role by supporting firms in several different export qualification programs. As a significant entity in promoting exports and attracting foreign investment, ApexBrasil integrates strategic industry development with public policy support (ApexBrasil 2020b; Alcaraz & Zamilpa, 2017).

Although internationalization ecosystems have garnered significant academic attention, there remains a critical theoretical gap regarding the institutional role of Export Promotion Agencies (EPAs) in these frameworks, particularly in the development and evolution of their institutional functions (Ribeiro, Figueiredo, & Forte, 2020; Dornelas & Carneiro, 2018). Existing research often emphasizes firm-level strategies and market interactions, overlooking how EPAs shape and integrate into these ecosystems as pivotal actors. This oversight is especially evident in studies of ApexBrasil, which, despite its prominence, has been insufficiently examined within the broader ecosystemic perspective (Costa; Calazans & Araújo, 2024). Addressing this gap is essential for advancing theoretical and practical understanding of EPAs' contributions to internationalization processes, particularly in fostering inclusive economic growth, creating quality jobs, and enhancing productivity – key objectives aligned with the Sustainable Development Goals (SDGs) prioritized by industry, government, and civil society (UN, 2024; Shen, Venaik & Liesch, 2024).

The current study is based on the internationalization ecosystem framework (INT-E) proposed by Costa et al. (2024a), which integrates four distinct perspectives: (a) Business Ecosystems, characterized by economic communities supported by collaborative entities such as multinational enterprises (MNEs) and clusters (Hewett et al., 2022); (b) Entrepreneurial Ecosystems, which foster innovative and high-growth ventures, including startups and scale-ups (Van Schijndel, 2019); (c) Innovation Ecosystems, focusing on the creation and exchange of knowledge beyond economic boundaries (Prokopenko, Emerenko, & Omelyanenko, 2014); and (d) Platform Ecosystems, which emphasize the digital business landscape, advanced technology, and collaborative initiatives (Nambisan, Zahra, & Luo, 2019).

A qualitative approach is employed to explore internationalization ecosystems, focusing on both established theoretical constructs and emergent categories (Creswell & Creswell, 2018) observed in ApexBrasil's operations. The research combines a systematic literature review and

thematic analysis with in-depth interviews conducted with nine senior ApexBrasil representatives. By integrating deductive and inductive reasoning, the study bridges theoretical frameworks with practical insights, enriching the understanding of internationalization ecosystems and tailoring their application to the Brazilian context.

Thus, This research aims to evaluate the critical institutional role of export promotion agencies (EPAs) within internationalization ecosystems, with a particular focus on ApexBrasil. It investigates how EPAs contribute to sustainable economic growth, enhance export competitiveness, and facilitate firm integration into global value chains. The study further explores how these contributions align with key economic objectives of the Sustainable Development Goals (SDGs), especially those related to decent work, industrial innovation, and economic resilience.

Theoretical framework

The study of internationalization reflects the multifaceted nature of how firms expand beyond domestic borders (Cha, Kotabe, & Wu, 2023; Hewett et al., 2022). It includes incremental approaches like the Uppsala Model, which emphasize gradual growth and cultural proximity, and operational strategies that focus on increasing international involvement beyond mere commercial transactions (Hult, Gonzalez-Perez & Lagerström, 2020). Foreign Direct Investment (FDI) approaches highlight the role of investment flows, while the I-Model Theory underscores the importance of decision-making and innovation management (Alcaraz & Zamilpa, 2017; Knight & Liesch, 2016). Resource-based perspectives consider internationalization as a competence derived from accumulated resources (Zahoor, Al-Tabbaa, Khan, & Wood, 2020), and the Networking approach emphasizes the significance of stakeholder interconnections (Monticelli, Vasconcellos & Garrido, 2017). Additionally, the concept of Born Global organizations reveals the potential for rapid internationalization, particularly amongst digital SMEs. Collectively, these varied perspectives provide a comprehensive understanding of the complex processes and strategies that drive firms to compete in global markets (Knight & Liesch, 2016).

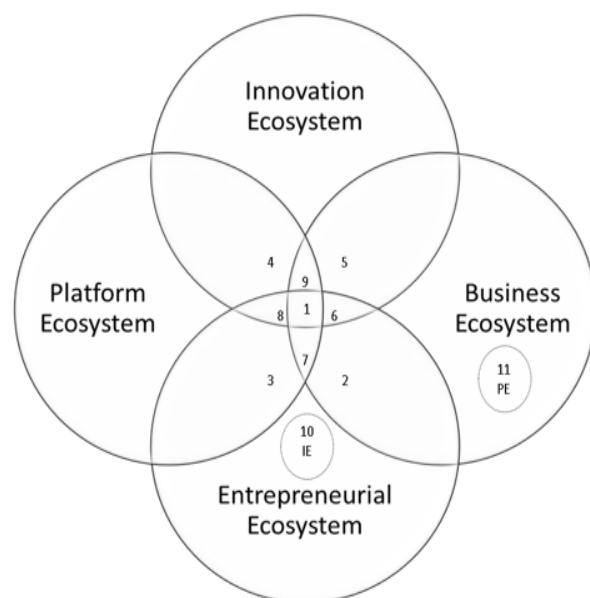
The ecosystemic perspective highlights the dynamic and complex interactions within a multifaceted, interdependent system that spans various industries, geographies, and cultures (Costa et al., 2024a, 2024b; Adner, 2017). These ecosystems are constantly evolving, showing significant variation across countries and industries due to different institutional relationships, competitiveness levels, infrastructure types, business life cycles, and cultural specificities (Parente, Rong, Geleilate & Misati, 2019). Although international business literature often focuses on forming and configuring international networks for the internationalization process, gaps remain in understanding the interdependence of international ecosystems, especially concerning digital businesses (Costa et al., 2024; Parente, Geleilate & Rong, 2018).

The conceptual framework guiding this study (Costa et al., 2024a, 2024b) employs an internationalization ecosystem perspective (INT-E), integrating four interrelated concepts: Business Ecosystems, Entrepreneurial Ecosystems, Innovation Ecosystems, and Platform Ecosystems, as presented in Figure 1 and further explained in Table 1:

Figure 1

Internationalization Ecosystem Core Concept

- 1 Core Internationalization Ecosystem Model
- 2 MNE/SME Integration Ecosystem
- 3 New Digital Business Ecosystem
- 4 Open Digital Innovation Ecosystem
- 5 TH Model and Variants Ecosystem
- 6 TH Model and Variants Ecosystem
- 7 Digital Business Ecosystem
- 8 Digital TH Model and its Variants Ecosystem
- 9 Digital TH Model and its Variants Ecosystem
- 10 Digital Incubation/Acceleration Ecosystem
- 11 Digitalization Ecosystem



Source: Based on Costa et al. (2024a, 2024b)

Business Ecosystems, supported by collaborative organizations, include traditional business models, industries, multinational enterprises (MNEs), and clusters (Kuberska & Mackiewicz, 2022; Hult, Gonzalez-Perez & Lagerström, 2020; Ikram et al., 2018; Musso & Francioni, 2015). Entrepreneurial Ecosystems focus on fostering innovative and high-growth ventures, such as start-ups and scale-ups (Ferreira, Fernandes & Veiga, 2023; Van Schijndel, 2019). Innovation Ecosystems extend beyond economic realms to emphasize knowledge creation and exchange, incorporating the triple and quadruple helix perspectives (Baier-Fuentes, Guerrero & Amorós, 2021; Prokopenko, Emerenko & Omelyanenko, 2014; Leydesdorff, 2012). Platform Ecosystems represent digital business environments characterized by advanced technology, knowledge transfer, and collaboration. This comprehensive framework provides a robust foundation for understanding the dynamics of internationalization across diverse ecosystem dimensions (Costa et al., 2024 a; Nambisan, Zahra & Luo, 2019).

The concepts analysed are interrelated, sharing a common focus on internationalization as an essential strategy for organizational survival and growth, albeit approached through various levels and perspectives. Consequently, the concept of the internationalization ecosystem can be understood as a unifying framework that integrates elements from all the other ecosystems examined, serving as a central connective idea (Costa et al., 2024a, 2024b).

Whilst each ecosystem is unique due to its environmental characteristics and the interplay among its actors, the identification of shared features across different ecosystem frameworks allows for the classification of distinct types of ecosystem arrangements. These arrangements, though varied, are inherently tied to the internationalization process, reflecting its multifaceted nature (Ferreira, Fernandes & Veiga, 2023; Nambisan, Zahra & Luo, 2019; van Schijndel, 2019), as seen in Table 1:

Table 1
Ecosystem Dynamics and Nature

Int.	Sets	Type of Ecosystem	Examples
1	$BE \cap EE \cap IE \cap PE$	Core Internationalization Ecosystem Model - Modern and dynamic ecosystems, based on open innovation, collaborative work and technology driven business models. Internationalization has become the most	Silicon Valley (USA); Shenzhen (CN); Tel Aviv (IL).

		essential aspect of its nature, as it is essentially transnational.	
2	$BE \cap EE$	MNE/SME Integration Ecosystem - Traditional and Innovative business working in partnership for open innovation in order to address specific industry problems. Internationalization occurs mainly as a secondary factor.	Automotive Industry Cluster in Stuttgart (GE); Fashion and Design Cluster in Milan (IT); Renewable Energy Cluster in Copenhagen (DK).
3	$EE \cap PE$	New Digital Business Ecosystem - Disruptive digital business models, working in collaboration through platforms. Internationalization is a key aspect of its process.	Fintech Ecosystem in London (UK); Digital Health Ecosystem in Stockholm (SE).
4	$IE \cap PE$	Open Digital Innovation Ecosystem - HEIs, Spinoffs and other forms of organizations born and bred to produce disruptive business models in partnership with entrepreneurial universities and other supporting organizations. Internationalization is a key aspect of its process.	MIT Media Lab Ecosystem (USA); Station F Entrepreneurial Campus (FR); Imperial College London Innovation Ecosystem (UK).
5	$BE \cap IE$	TH Model and Variants Ecosystem - Traditional TH Model, internationalization is not a primary concern, but growing in importance.	Oxford Science Park (UK); Biotech Cluster in Boston (USA).
6	$BE \cap EE \cap IE$	TH Model and Variants Ecosystem (focused on new business models) - Traditional TH Model and its variants, internationalization has become a central element.	Tech City in London (UK); MedTech Cluster in Zurich (CH).
7	$BE \cap EE \cap PE$	Digital Business Ecosystem (focused on digitization and digital transition) - Startups and scale-ups working in partnership with traditional investors seeking disruptive business models. Internationalization is a central aspect of its ecosystem dynamics.	E-commerce Innovation Cluster in Seoul (KR); Fintech Cluster in Singapore; Tech Accelerator in Silicon Valley (USA).
8	$EE \cap IE \cap PE$	Digital TH Model and its Variants Ecosystem - HEIs, Spinoffs, startups and scale-ups, working within disruptive clusters of SMEs and/or platforms. Internationalization is a central aspect of its ecosystem.	Smart City Innovation Hub in Barcelona (ES); Cybersecurity Innovation Cluster in Tel Aviv (IL).
9	$BE \cap IE \cap PE$	Digital TH Model and its Variants Ecosystem (focused on traditional business models) - HEIs, Spinoffs, startups and scaleups working within clusters of traditional business. Internationalization may occur indirectly, but it is a central aspect of its ecosystem.	Woodworking Excellence Cluster in Vancouver (CA); Manufacturing Innovation Hub in Stuttgart (GE).
10	$EE \cap IE$	Digital Incubation/Acceleration Ecosystem - highly open and innovative organizations, working in partnership with local and international ecosystems. Internalization is perceived as central, but there is a lack of studies on its dynamics. This is the cradle of the born global firm	Startup Chile in Santiago (CL); Lisbon Challenge (PT).
11	$BE \cap PE$	Digitalization Ecosystem - traditional business models undergoing digital transition and digitization or integration into larger platforms. Internationalization is encouraged as a core strategy.	Digital Banking Innovation Network in London UK); E-Commerce Transformation Cluster in Shanghai (CN).

Source: Based on Costa et al. (2024b) and Costa (2023).

Export promotion agencies (EPAs) play a crucial role in internationalization ecosystems, facilitating the internationalization of businesses, especially for small and medium-sized enterprises (SMEs) (Ribeiro, Figueiredo e Forte, 2020). By providing essential services such as market research, training, and financial assistance, these agencies help companies navigate the complexities of global trade, enhancing their competitiveness and sustainability (Monticelli, Calixto, Vasconcellos & Garrido, 2017). EPAs also contribute to economic growth by diversifying export markets, increasing foreign exchange earnings, and fostering innovation. Furthermore, they support the development of national brands, improve product standards, and create employment opportunities, thereby strengthening the overall economic fabric of their respective countries (Leonidou, Palihawadana, & Theodosiou, 2011). Through these multifaceted efforts, EPAs are indispensable in driving global trade and economic development (Costa et al., 2022; Dornelas & Carneiro, 2018; Farias & Miranda, 2016).

The specialized literature has extensively explored innovation systems, focusing on the arrangements amongst key actors known as the Triple and Quadruple Helix framework (Leydesdorff, 2012). The Helix Framework emphasizes the importance of innovation as an engine of economic development, requiring synergistic collaboration amongst universities, industries, civil society and government to achieve measurable economic, social, and technological results on a global scale. In this context, Export Promotion Agencies (EPAs) play a central role as facilitators in integrating these actors, promoting institutional cooperation and open innovation (Costa, 2023; Ribeiro, Figueiredo e Forte, 2020; Champenois & Etzkowitz, 2018; Monticelli et al., 2017).

In the internationalization process, innovation ecosystems become more open and dynamic, involving multiple domains and actors, such as R&D networks, value chain innovation networks, international entrepreneurial networks, and the international community. However, despite the relevance of open innovation and collaboration as internationalization strategies, the specialized literature still lacks studies that deeply explore the internationalizing role of the Helix model. In this scenario, EPAs emerge not just as facilitators of training and funding, but as central agents, or ‘pivotal helix’, (Costa et al., 2024a, 2024b, Costa, 2023; Hewett, 2022) in the articulation of these ecosystems on a global scale. The development of

new studies that investigate the internationalization of these ecosystems is, therefore, essential to advance knowledge in this area.

Although the literature on internationalization provides a robust exploration of firm-level strategies, innovation ecosystems, and institutional roles in fostering global trade (Ferreira, Fernandes & Veiga, 2023; Nambisan, Zahra & Luo, 2019; van Schijndel, 2019; Knight & Liesch, 2016), a significant theoretical gap remains in understanding Export Promotion Agencies (EPAs) within the broader context of internationalization ecosystems. Traditional perspectives often emphasize EPAs as providers of training, funding, and market research, with limited focus on their evolving institutional functions in integrating and shaping internationalization ecosystems. Specifically, studies have yet to fully explore EPAs, such as ApexBrasil, as pivotal agents—operating beyond their conventional roles—who promote internationalization culture and facilitate multi-actor cooperation across diverse ecosystem dimensions. Addressing this gap is essential to advancing theoretical understanding and practical applications of ecosystem-based internationalization strategies (Costa et al, 2022; Ribeiro, Figueiredo e Forte, 2020).

The Brazilian Trade and Investment Promotion Agency (ApexBrasil), established in 1997, has significantly promoted Brazil's export culture and international expansion through various programs and initiatives (ApexBrasil 2020a, 2020b; Monticelli et al., 2017). The agency's initiatives have impacted all stages of the internationalization cycle, including international insertion, market consolidation, and the expansion of international operations. A key program is the Programa de Qualificação para Exportação (PEIEX), launched in 2008/2009, which offers training and tailored export plans to help companies navigate the complexities of exporting (Cruz, Bussolo & Iacovone, 2018; Dornelas & Carneiro, 2018; Monticelli et al., 2017; Lourenção & Giraldi, 2015).

ApexBrasil has also been instrumental in enhancing the competitiveness of Brazilian companies through sectoral projects that facilitate trade promotion, internationalization training, and investments in research and physical assets (Bianchi & Figueiredo, 2017; Monticelli et al., 2017; Farias & Miranda, 2016; Palma et al., 2014). The agency's efforts in attracting foreign direct investment have been crucial, especially considering Brazil's historical

challenges in drawing innovation-intensive and export-oriented investments compared to countries like China and India (Alcaraz & Zamilpa, 2017).

Moreover, ApexBrasil supports local productive arrangements and sectoral projects, addressing modernization and development challenges while fostering commercial networking and access to technical consultancy (Monticelli et al., 2017; Camozzi et al., 2014; Lima & Carvalho, 2012). The agency's sectoral branding initiatives further enhance the international reputation of Brazilian products by highlighting their competitive advantages and fostering customer loyalty (Lourenção & Giraldi, 2015).

The PEIEX program, in particular, plays a vital role in guiding SMEs through the internationalization and digital transition processes with specialized training and tailored export plans, serving as a cornerstone for other ApexBrasil internationalization support services, such as trade fairs and business matchmaking sessions (Dornelas & Carneiro, 2018).

Despite the importance of Export Promotion Agencies (EPAs) in general for the internationalization process (Ribeiro, Figueiredo e Forte, 2020) and ApexBrasil in particular (Dornelas & Carneiro, 2018), it seems that there is a lack of relevant studies on such institutions from a broader perspective of internationalization ecosystems, focusing on new institutional roles they may take in promote an internationalization culture and how these roles may differ from traditional export promotion perspectives (Costa et al., 2022; Costa, 2023; Monticelli et al., 2017; Champenois & Etzkowitz, 2018).

The theoretical framework developed in this study demonstrates strong alignment with the United Nations Sustainable Development Goals (SDGs), particularly SDG 9 (Industry, Innovation, and Infrastructure) and SDG 17 (Partnerships for the Goals) (UN, 2024). The focus on internationalization ecosystems, including business, entrepreneurial, innovation, and platform ecosystems (Costa et al., 2024a, 2024b), supports these goals by fostering innovation, encouraging research and development, and enhancing industrial capabilities. These ecosystems contribute to the development of resilient infrastructure and the promotion of inclusive and sustainable industrialization (Shen, Venaik & Liesch, 2024; DasGupta, Kumar & Pathak, 2022).

In this context, export promotion agencies (EPAs), such as ApexBrasil, play a pivotal role in advancing SDGs 9 and 17 by integrating key stakeholders across sectors, including universities, industries, governments, and civil society (Costa et al., 2024a, 2024b; UN, 2024). Through the facilitation of innovation and cross-sectoral collaboration, EPAs contribute to the creation of robust innovation ecosystems that enhance the global competitiveness of small and medium-sized enterprises (SMEs). Their initiatives strongly reflect the objectives of SDG 17, particularly the emphasis on multi-stakeholder partnerships to address complex global challenges (UN, 2024; Shen, Venaik & Liesch, 2024).

Methodology

For the current research, a qualitative approach was chosen for its suitability in understanding complex contemporary phenomena within their contexts, widely used in IB research to provide detailed, process-oriented insights (Costa et al., 2024a, 2024b; Creswell & Creswell, 2018). A Systematic Literature Review, supported by Content and Thematic Analysis, identified various research approaches to internationalization from an ecosystemic perspective (Costa et al., 2024a, 2024b, Adner, 2017). The study also included corporate reports and publications from ApexBrasil (ApexBrasil, 2020a, 2020b).

Primary data was collected through semi-structured, in-depth interviews with nine senior ApexBrasil representatives between June and September 2023, using 50 open-ended questions to allow for thematic flexibility (Costa, 2023). The semi-structured interview guide is presented in the Appendix section, Table 7.

Conducted virtually, these interviews totalled 415 minutes, averaging 46 minutes each, and were transcribed into 59,730 words across 148 pages. Interviewees, averaging 11.5 years of service, represented various key sectors of ApexBrasil including Institutional and Governmental Relations, Competitiveness, and Market Intelligence.

Content and Thematic Analysis, combining deductive and inductive reasoning, followed protocols by Guest, MacQueen, and Namey (2012) as well as Boyatzis (1998), identifying significant data themes related to the research questions (Creswell & Creswell, 2018). For data analysis, in previous research (Costa et al., 2024a; 2024b) the current authors

have found in the literature key thematic elements related to each ecosystem concept. In Table 2 we present each macro, meso e micro thematic category and their respective code that was utilised to analyse the data gathered during interviews.

Table 2
Internationalization Ecosystems (INT-E) Constructs

Macro Dimensions	Meso Dimensions	Micro Dimensions
Business Ecosystems (BE)	Business strategy (BS)	Resource-Based View (RBV)
		Transactional Costs (TC)
		International Ambidexterity (IAB)
		Dynamic capabilities (DC)
		Strategic alliances (SA)
		Knowledge-based view (KBV)
	Clusters (CTs)	Regional Clusters (RCts)
		Public Policies (PP)
	Networking, supply chain and knowledge sharing (NS)	Knowledge Transfer (KT)
	Foreign Direct Investment (FDI)	Supply Chain Management (SC)
Entrepreneurial Ecosystems (EE)	Entrepreneurial activity (EA)	Cross-Border Venture Capital Investments (CBV)
		Mergers & acquisitions (M&A)
		Local Support Ecosystems (LSE)
		Economic Resilience (ER)
	International Entrepreneurship (IE)	Entrepreneurship Policies (EP)
		Mixed embeddedness theory (MET)
		Ecosystem Integration (Eint)
	Academic Entrepreneurship (AE)	Transnational entrepreneurship (TE)
		Entrepreneurial Education (Eed)
		Academic entrepreneurship (AE)
		Technology-based university spin-offs (T-USOs)
	Entrepreneurial organizations (EO)	Business Incubators and accelerators (BIAs)
		Small and Medium Organizations (SMEs)
		Startups and Scaleups (STSC)
Innovation Ecosystems (IE)	Triple and Quadruple Helix (THx)	Born Globals (BG)
		University - Industry collaboration (UEC)
		Innovation networks (IN)
		Entrepreneurial discovery process (EDP)
	Innovation Strategy (IS)	Innovation policies (InP)
		Open Innovation (OI)
		Smart Specialization (SS)
	Innovative Organizations (Ios)	National Innovative Systems (NIS)
		Research Technology Organizations (RTO)
Platform Ecosystems (PE)	Digital Transition and Digitization (DT)	Higher Education Institutions' third mission (HEI)
		Digital servitisation (DS)
		Digital transformation (DT)
	Digital ecosystems (DE)	Digital Economy (DE)
		e-commerce and e-marketing (e-cm)

		Omnichannel strategy (OMS)
		Digital Business Models (DBM)
		Enabling Technologies (Dtech)

Source: Based on Costa et al. (2024a, 2024b).

Based on these dimensions, the semi-structured interviews were conducted, and through content and thematic analysis (Boyatzis, 1998), a new Macro-Category emerged. This *a posteriori* Macro-Category included six Meso-Dimensions and 13 Micro-Categories, each with its own code, which were not previously identified in the original literature review (Costa, 2023), as presented in Table 3.

Table 3.
A Posteriori Categories Constructs

Macro Category	Meso Category	Micro Categories
ApexBrasil (APEXB)	Networking, supply chain and knowledge Sharing (NS)	Key Companies (KC)
		Regional Development (RegD)
	Advanced Technology (AT)	Transport Technology (TT)
		Aggrotech (Agtec)
	Busines Strategy (BS)	Gender (Gen)
		Institutional Barriers (IB)
		Operational Barriers (OB)
	Triple and Quadruple Helix (THx)	Presidential Diplomacy
		Environmental Social and Governance (ESG)
	Foreign Direct Investment (FDI)	Brazilian S System (SiS)
		Infrastructure (INF)
	International Entrepreneurship (IE)	Export Culture (Cexp)
		Tele Emigrants/ Immigrants (Tim)

João Costa, Diogo de Menezes Cortes Bezerra, Leandro Trigueiro Fernandes Costa (2023).

The integration of the deductive and inductive approaches is methodologically significant for analysing the interviews with ApexBrasil experts, as it allows for a systematic structuring and comparison between theoretical dimensions of internationalization ecosystems and the emergent empirical categories (Costa 2023; Creswell & Creswell, 2018). This approach facilitated the identification of gaps in the literature, whilst enhancing the existing theoretical model by incorporating new dimensions, and empirically validated theoretical constructs in the specific context of ApexBrasil.

Results and discussions

During the interviews, several projects and initiatives from ApexBrasil were mentioned by the interviewees in different contexts. In Table 4 we present the major projects/programmes discussed.

Table 4
Projects Discussed during the Interviews

Project	Objective
Export Qualification Program - PEIEX	The Export Qualification Program by ApexBrasil helps Brazilian companies start exporting in a planned and secure manner. Implemented by dozens of hubs across the country, it uses technical teams to apply the PEIEX methodology.
Sectoral Projects	Commercial promotion, communication, and structural actions through agreements with business associations. Includes trade shows, business rounds, press advisory, digital communication, and intelligence studies.
Design Export	Supports the development of design and innovative solutions for export. Companies receive consultancy, training, and technical and financial support.
Women and International Business Program	Enables participants to start or increase exports through courses, business rounds, and other opportunities.
e-Xport	Trains national companies to expand Brazil's participation in global e-commerce.
Scale-up in Brazil Program	An acceleration program developed by ApexBrasil, ABVCAP, and Israel Trade & Investment. Selected 20 international companies to expand operations in Brazil.
TechMakers	A partnership with EMBRAPA for co-development of R&D projects, receiving funding from Brazil and abroad.
Opportunity Map	Identifies new opportunities for Brazilian products in over 100 countries through data cross-referencing.
Buyer Project	International buyers visit Brazil for business meetings, supported by ApexBrasil offices and SECOMs.
Corporate Venture in Brazil	Stimulates corporate venture capital investments by large international corporations in Brazil, fostering entrepreneurial activities.
Start-out Brazil	Supports Brazilian startups' insertion into the world's most promising innovation ecosystems through a government partnership.
BraExp	Connects Brazilian companies, especially MSMEs, to export service providers through a digital platform.
Competitiveness Workshops	Remote or in-person training on foreign trade topics to increase export culture and business competitiveness.
Export Acceleration Program	Customized commercial promotion actions for beginner exporting companies, providing market access and promotion.
Trade Panel	Monitors monthly evolution of Brazil's trade indicators by partner country, product, and sector, aiding decision-making processes.

The different projects discussed within the Brazilian internationalization ecosystem seem to point out that ApexBrasil has developed a multifaceted approach to enhance Brazil's

global trade presence and internationalization, as previously discussed by Costa et al. (2022). Through a range of programs, such as the Export Qualification Program (PEIEX), the Export Acceleration Program, and Sectoral Projects, ApexBrasil addresses various stages of the export journey (Ribeiro, Figueiredo e Forte, 2020; Dornelas & Carneiro, 2018).

These initiatives prepare companies to enter international markets securely and provide industry-specific support, aligning with international business theories like the Uppsala model (Hult, Gonzalez-Perez & Lagerström, 2020) and the I-Model Theory (Alcaraz & Zamilpa, 2017). The agency also fosters innovation through its Design Export program and promotes gender diversity with the Women and International Business Program, reflecting the Resource-Based View and inclusive business practices further aligned with sustainable development goals beyond economy and infrastructure (UN, 2024; Shen, Venaik & Liesch, 2024 Zahoor et al., 2020).

Furthermore, ApexBrasil supports the expansion of e-commerce, international collaboration, and market intelligence through programs like e-Xport, Scale-up in Brazil, TechMakers, and the Opportunity Map. The agency attracts corporate venture capital investments and supports startups through initiatives like Corporate Venture in Brazil and Start-out Brazil, aligning with the Born Global perspective (Knight & Liesch, 2016).

PEIEX was the single project with most mentions, 31,95%, followed by the Sectoral Projects with 18,93%. The other projects/programs seen in Table 4 were divided into two thematic groups, those with a focus on Digital Business, Networking and Corporate Venture, and those focusing on Training and Knowledge Transfer. Only the projects and other initiatives that are headed by ApexBrasil were considered in this analysis. In Table 5 we present the main codes related to each project according to the thematic analysis from the interviews:

Table 5
Projects and Major Codes

Export Qualification Program - PEIEX		Sectoral Projects		Digital Business, Networking & Corporate Venture		Training & Knowledge Transfer	
Code	%	Code	%	Code	%	Code	%
(BE BS SA)	16,67%	(BE BS SA)	20,51%	(BE BS SA)	18,18%	(BE CTs KT)	17,24%
(BE NS KT)	12,96%	(BE CTs RCTs)	15,38%	(BE FDI CBV)	9,09%	(PE DTD DT)	13,79%
(BE BS RBV)	7,41%	(BE NS SC)	10,26%	(EE EO STSC)	9,09%	(BE BS SA)	10,34%
(EE EA LSE)	7,41%	(EE EA LSE)	10,26%			(EE EA LSE)	10,34%
						(EE EO SMEs)	10,34%
						(PE DE DBM)	10,34%

The high frequency of strategic alliances (BE BS SA) suggests that collaboration and ecosystem integration is a critical component of the PEIEX program. This indicates a strong emphasis on building networks that can facilitate entry into foreign markets, leverage shared resources, and mitigate risks, as previously pointed out in other studies (Costa et al., 2022; Ribeiro, Figueiredo e Forte, 2020; Dornelas & Carneiro, 2018).

The prominence of knowledge transfer (BE NS KT) highlights the importance of sharing and acquiring knowledge to develop competitive advantage, innovate and adapt to external markets (Ribeiro, Figueiredo e Forte, 2020). The occurrence of Resource-Based View (BE BS RBV) suggests that the PEIEX program values the internal resources and capabilities of firms as a foundation for international success. This is reflected in their search for companies and products with Brazilian unique traits or “*brasilidade*” (Costa et al., 2022; ApexBrasil 2020b).

Finally, the focus on local support ecosystems (EE EA LSE) points to the significance of local infrastructure, institutions, and networks in supporting internationalization efforts. This can include local governments, trade associations, and business incubators that provide essential services, guidance, and resources to companies looking to expand internationally (Costa et al., 2024a). The equal frequency with the resource-based view suggests that local support is considered equally important as internal capabilities, underscoring the

interconnectedness of these elements in the internationalization process (Lachman & López, 2022).

Based on the data, it is possible to infer that the PEIEX program's approach to internationalization is multifaceted, with a strong emphasis on building strategic alliances and facilitating knowledge transfer. These elements are supported by leveraging both internal resources and local ecosystems. The program appears to recognize that successful internationalization requires not just strong internal capabilities, but also the ability to connect with external networks and adapt to local conditions. This aligns with the broader concept of internationalization ecosystems, in which the interaction between firms, institutions, and networks plays a crucial role in enabling companies to enter and thrive in global markets (Costa et al., 2024a, 2024b; Cha, Kotabe & Wu, 2023; Hewett et al., 2022; Van Schijndel, 2019) as well as with the sustainable development goals proposed by the United Nations (UN 2024; Shen, Venaik & Liesch, 2024).

Regarding Sectoral Projects, the data from the interviews with ApexBrasil experts reveal several important insights: Once again, strategic alliance (BE BS SA) is the most common theme, suggesting that forming partnerships is a crucial component of sectoral projects. This likely reflects a focus on creating synergies between firms within the same sector, as well as with international partners, to enhance competitiveness and facilitate market entry, alike the PEIEX program (Dornelas & Carneiro, 2018).

It is interesting to notice that regional clusters (BE CTs RCTs) are also a key theme related to sectoral projects, indicating the importance of geographic concentration of interconnected businesses and institutions within specific sectors. Regional clusters are vital in building a competitive edge through innovation, knowledge spillovers, and shared infrastructure, as confirmed in the specialized literature (Kuberska & Mackiewicz, 2022; Ikram et al., 2018; Musso & Francioni, 2015).

The mentioning of supply chain management (BE NS SC) highlights the critical role of efficient and resilient supply chains in supporting sectoral internationalization, reinforcing the relevance of strategic alliances and regional clusters as well as pointing out to a role of ApexBrasil in ecosystem orchestration (Costa, 2023; Hewett, 2022). That is further reinforced

by the emphasis given to local support ecosystems (EE EA LSE) underscoring the importance of local infrastructure and institutional support in facilitating internationalization (Costa et al., 2024a).

The data indicates that ApexBrasil's sectoral projects approach to internationalization, alike the PEIEX Program, is heavily reliant on building and leveraging strategic alliances, as well as regional clusters, and efficient supply chains, all within the context of supportive local ecosystems. The emphasis on strategic alliances and regional clusters suggests that collaboration and geographic concentration are key strategies for driving sectoral internationalization, whilst the focus on supply chain management and local support ecosystems highlights the importance of operational efficiency and institutional backing in sustaining international competitiveness (Kuberska & Mackiewicz, 2022; Musso & Francioni, 2015).

Finally, in the other categories of projects analysed - Digital Business, Networking & Corporate Venture as well as Training & Knowledge Transfer, once again, Strategic Alliances (BE BS SA) had prominent roles, 18,18% and 10,34% respectively, indicating that the whole modus operandi of ApexBrasil relies on strategic integration with key stakeholders, whilst reinforcing the idea of internationalization as a networking strategy and ApexBrasil as a pivotal axis in the Brazilian internationalization ecosystem (Ribeiro, Figueiredo e Forte, 2020; Dornelas & Carneiro, 2018; Farias & Miranda, 2016 Musso & Francioni, 2015).

To further reinforce the notions of ApexBrasil as pivotal helix integrating the internationalization ecosystem, across the interview, several institutions were mentioned as involved in the different projects/programs. In Table 6 we present the institutions and the major codes related to them.

Table 6
Institutions and Major Codes

Digital Platforms (Amazon, Alibaba and eBay) (17,95%)		Research, Innovation, and Development Associations in Agriculture, Industry, and Commerce (10,26%)		Producer Associations in Agriculture, Industry, and Commerce (10,26%)	
Code	%	Code	%	Code	%
(PE DE e-cm)	24,49%	(EE AE BIAS)	18,18%	(BE BS SA)	38,71%
(BE BS SA)	20,41%	(IE THx UEC)	18,18%	(EE EA LSE)	12,90%
(EE EA LSE)	12,24%	(BE BS SA)	15,15%	(EE IE TE)	12,90%

(PE DTD DE) 10,20%				(BE NS SC) 6,45%	
Brazilian Ministry of Development, Industry, Commerce, and Services – MDIC (8,5%)		Brazilian Service of Support for Micro and Small Enterprises – SEBRAE (8%)		National Confederation of Industry – CNI (6,6%)	
Code	%	Code	%	Code	%
(BE BS SA)	30,43%	(BE BS SA)	45,45%	(BE BS SA)	44,44%
(BE CTs PP)	13,04%	(EE EA LSE)	13,64%		
(EE EA LSE)	13,04%				
Universities and Other Educational and Research Institutions (5,49%)		Embassies, Consulates, and Related Entities (2,92%)		Financial and Development Institutions (2,93%)	
Code	%	Code	%	Code	%
(IE THx UEC)	20,00%	(BE BS SA)	25,00%	(BE BS SA)	50,00%
(BE BS SA)	13,33%	(BE FDI CBV)	25,00%	(BE NS SC)	25,00%
(EE AE Eed)	13,33%	(EE EA LSE)	25,00%	(BE BS KBV)	12,50%
(PE DE DBM)	13,33%	(BE CTs PP)	12,50%	(IE IOs RTOs)	12,50%
		(EE EO STSC)	12,50%		

It is worth noting that once again, Strategic Alliances (BE BS SA) are related to all institutions mentioned in the interview. Furthermore, it is important to point out that Digital Platforms had a prominent presence in the interviews, pointing out to the fact that ApexBrasil has embraced digital models for export promotion of Brazilian goods and services, having e-commerce (PE DE e-cm) as a central element of many of their programs.

ApexBrasil, as part of the System S framework, seems to play a multifaceted role that goes beyond executing public policy. Rather than aligning solely with government, it serves as a central connector amongst various sectors – government, academia, civil society, and industry – within the internationalization ecosystem. This positioning allows ApexBrasil to act as a collaborative facilitator, creating platforms and initiatives that bring together diverse stakeholders. While not primarily focused on innovation, the agency strategically aligns activities across sectors to maximize the impact of innovation in internationalization, highlighting its crucial role in fostering dialogue, synergy, and coordinated efforts across different institutional roles as previously pointed out in past research (Costa 2023; Costa et al., 2024a, 2024b).

Final considerations

The study on the role of export promotion agencies (EPAs) within internationalization ecosystems reveals the multifaceted and strategic nature of international expansion efforts, particularly through the lens of ApexBrasil's initiatives. Internationalization is a complex process that involves not only extending operations beyond domestic boundaries but also navigating a myriad of challenges related to cross-border regulations, cultural differences, and market adaptation. As the global economy continues to evolve, firms are increasingly seeking to leverage international markets for growth, risk diversification, and competitive advantage.

The results of the interviews highlight the diverse initiatives and programs led by ApexBrasil to foster Brazil's internationalization efforts. These projects, including the Export Qualification Program (PEIEX), Sectoral Projects, and initiatives focused on digital business and corporate venture, align with the theoretical frameworks of internationalization, particularly those emphasizing strategic alliances, resource-based views, and local ecosystem integration. The PEIEX program, for example, underscores the importance of building networks and strategic partnerships (as evidenced by the prominence of the "strategic alliances" code), which aligns with Costa et al.'s (2022) argument that collaboration is a critical enabler of successful internationalization. Similarly, the frequent mention of knowledge transfer reflects the emphasis on the development of competitive advantages through both internal resources and external collaborations, supporting the Resource-Based View (RBV) as discussed by Zahoor et al. (2020).

Furthermore, the data suggests that ApexBrasil's multifaceted approach involves a strong integration of local ecosystems, including partnerships with trade associations, regional clusters, and financial institutions, reinforcing the interconnectedness of internal resources and external networks in driving international success. This supports the concept of "pivotal helix," where ApexBrasil plays a central role in integrating various stakeholders and facilitating the internationalization of Brazilian firms (Costa et al., 2024). The prominence of initiatives like the "Opportunity Map" and "TechMakers" highlights the agency's strategic role in facilitating market intelligence and fostering innovation, further reinforcing the view that successful internationalization is not only about leveraging firm-level resources but also about connecting

to broader ecosystems that provide access to critical knowledge, technology, and networks (Cha et al., 2023; Van Schijndel, 2019). Thus, while ApexBrasil's initiatives are broadly aligned with established international business theories, they also suggest a more dynamic, integrated approach to internationalization, where firm capabilities are amplified through strategic collaborations and ecosystem synergies.

We have highlighted the significance of EPAs, such as ApexBrasil, in facilitating this internationalization process. Through various programs and initiatives, ApexBrasil supports Brazilian firms in overcoming barriers to internationalization and enhancing their global competitiveness. The Export Qualification Program (PEIEX), Sectoral Projects, and other initiatives like Design Export and e-Xport demonstrate ApexBrasil's comprehensive approach to supporting companies at different stages of their export journey. By offering tailored training, market research, and financial assistance, these programs play a crucial role in helping firms navigate the complexities of global trade and expand their market presence.

The study also reveals that ApexBrasil's approach is deeply embedded within the broader internationalization ecosystem. The integration of Business Ecosystems, Entrepreneurial Ecosystems, Innovation Ecosystems, and Platform Ecosystems in the framework proposed by Costa et al. (2024a) has provided a robust foundation for understanding the dynamics of internationalization. ApexBrasil's initiatives, including those aimed at fostering innovation, supporting digital transformation, and promoting gender diversity, align with these ecosystemic perspectives, demonstrating how various components of the internationalization ecosystem interact and support each other.

Furthermore, it also presents a new perspective on EPAs' institutional role, presenting them as pivotal helixes in ecosystem integration, which goes beyond commercial promotion and involves government, businesses, academia and civil society. The integration of various ecosystem perspectives in the study underscores the importance of a comprehensive and interconnected approach to internationalization, providing valuable insights for both practitioners and researchers in the field.

This study contributes to the literature by introducing a novel perspective on the role of export promotion agencies (EPAs), particularly ApexBrasil, within internationalization

ecosystems. By framing EPAs as "pivotal helixes," the research moves beyond the traditional view of commercial promotion to highlight their function as institutional integrators that connect government, academia, businesses, and civil society. This approach emphasizes the interdependence of business, entrepreneurial, innovation, and platform ecosystems, revealing the complexity and systemic nature of internationalization.

ApexBrasil's initiatives—such as the PEIEX program and Sectoral Projects—illustrate how EPAs foster not only export readiness but also broader conditions for innovation, knowledge transfer, and strategic collaboration. These findings encourage both researchers and practitioners to adopt a more ecosystem-oriented framework for analyzing internationalization strategies, expanding theoretical boundaries and reinforcing the agency's relevance to sustainable development goals (UN, 2024).

The research presents some limitations inherent to its methodology and scope. Temporal restrictions may impact the relevance of the results, necessitating consideration of ApexBrasil's evolving role over time. The subjective nature of content and thematic analysis introduces potential biases from the researchers, despite the strict protocols followed. Additionally, whilst the study acknowledges ApexBrasil's role as a pivotal helix in ecosystem integration, it does not provide an in-depth examination of the associated dynamics and challenges, indicating a need for more thorough investigation in future research, including other agencies and relevant stakeholders.

Future research should further explore the dynamic role of export promotion agencies (EPAs) as integrators within internationalization ecosystems, particularly through comparative analyses involving other national or subnational agencies beyond ApexBrasil. Investigating the operational challenges, governance structures, and long-term outcomes of EPA-led initiatives could deepen our understanding of their effectiveness and institutional evolution. Additionally, future studies may benefit from longitudinal approaches that capture how EPAs adapt over time to shifts in global trade, technological transformation, and sustainability demands, especially in alignment with the Sustainable Development Goals (SDGs).

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Appendix

Table 7

Semi structured Interview Guide

Questions
Part 1
1 - What is your name and position?
2 - How long have you been working at ApexBrasil?
3 - What is the nature of your position?
Part 2
1 - How does ApexBrasil collaborate with Brazilian companies to develop unique resources and competencies for internationalization?
2 - What methods does ApexBrasil employ to assess the internationalization potential of Brazilian companies based on their key resources?
3 - Given that internationalization often involves transaction costs, does ApexBrasil have a specific focus within its services and activities on working with companies to reduce these costs?
4 - Regarding international expansion, which can occur incrementally (optimizing existing business models) or disruptively (promoting new business models), do ApexBrasil's programs encompass both aspects of this strategy, or do they have a greater focus on one specific aspect?
5 - How do ApexBrasil's activities impact the dynamic capabilities of companies, i.e., how do they promote continuous change over time and adapt processes according to changes in the business market?
6 - How does ApexBrasil engage in forming alliances with other institutions that can promote the internationalization of Brazilian organizations?
7 - Which initiatives by ApexBrasil contribute to the generation of strategic alliances between companies and other stakeholders?
8 - What programs or initiatives by ApexBrasil focus on knowledge management for business internationalization?
9 - What strategies does ApexBrasil adopt to collect, store, and disseminate knowledge relevant to internationalization?
10 - Does ApexBrasil have programs or partnerships with specific clusters? If so, which ones?
11 - Does ApexBrasil collaborate with the government or other public bodies in discussing policies and programs for the promotion and support of clusters?
12 - How does ApexBrasil contribute to the promotion of knowledge transfer between companies and other stakeholders?
13 - How does ApexBrasil work to facilitate the integration of the value chain for exporting companies?
14 - Which initiatives by ApexBrasil focus on attracting investment for Brazilian companies, specifically cross-border venture capital?
15 - Does ApexBrasil play a role in coordinating, facilitating, or guiding companies to internationalize through mergers and acquisitions?
16 - Do ApexBrasil's programs and activities specifically focus on local networking systems that support companies?

- 17 - Do the programs and activities of ApexBrasil focus on training and developing entrepreneurs for the efficient use of resources?
- 18 - Does ApexBrasil collaborate with the government and other public bodies in suggesting policies aimed at promoting entrepreneurship?
- 19 - Does ApexBrasil have any projects or programs aimed at promoting entrepreneurship for immigrants arriving in Brazil?
- 20 - Does ApexBrasil have programs or projects working with Brazilians who have emigrated to other countries to promote entrepreneurship and business internationalization?
- 21 - Does ApexBrasil have programs or projects focused on productive ecosystems and their internationalization?
- 22 - What types of entry models beyond exportation are promoted by ApexBrasil's programs/projects?
- 23 - Does ApexBrasil have programs for Brazilian entrepreneurs residing abroad?
- 24 - What initiatives by ApexBrasil are geared towards entrepreneurial education?
- 25 - Who are the main partners of ApexBrasil working in the promotion of entrepreneurial education?
- 26 - Does ApexBrasil have partnerships with universities? What is the focus of these partnerships?
- 27 - Does ApexBrasil have programs or projects aimed at technology companies that were generated or incubated in universities?
- 28 - Which specific projects of ApexBrasil cater to SMEs?
- 29 - Could this type of organization be considered a priority for ApexBrasil?
- 30 - Which projects of ApexBrasil are focused on startups and scale-ups? What distinguishes these projects from other relevant projects?
- 31 - Does ApexBrasil have programs targeting born-global organizations?
- 32 - Does ApexBrasil participate in any collaboration projects between universities and industry?
- 33 - What projects of ApexBrasil focus on innovation management in companies and other organizations?
- 34 - Which projects or initiatives of ApexBrasil are focused on the acquisition, production, and exchange of information relevant to the development of entrepreneurial organizations?
- 35 - Does ApexBrasil work with the government and other public bodies in suggesting policies for the promotion of innovation processes in companies?
- 36 - Does ApexBrasil have projects/programs focused on the development and promotion of open innovation in productive ecosystems?
- 37 - Does ApexBrasil work with the government and other public bodies in suggesting policies for Smart Specialization, i.e., to identify and select a limited number of priority areas for investments in certain ecosystems?
- 38 - How does ApexBrasil position itself within initiatives for integration between university, government, and companies?
- 39 - What initiatives of ApexBrasil are geared towards research organizations and technological parks?
- 40 - What initiatives of ApexBrasil bring it closer to universities, specifically with a focus on generating value through entrepreneurship and the internationalization of companies?
- 41 - Does ApexBrasil have programs/projects focused on the digital servitization of manufacturing companies?
- 42 - Does ApexBrasil have programs/projects focused on the promotion and development of digital transition in companies?
- 43 - What is the impact of digital transition on ApexBrasil's operations?
- 44 - What changes in the digital economy have affected the services of ApexBrasil?
- 45 - Do you consider that the digitalization of the economy favours ApexBrasil in fulfilling its mission?
- 46 - What initiatives of ApexBrasil are geared towards the e-commerce and e-marketing of companies?

- 47 - What initiatives of ApexBrasil are aimed at the omnichannel integration of channels?
- 48 - Does ApexBrasil have internal initiatives focused on integrating different services, communicating with customers, and other projects?
- 49 - Does ApexBrasil have programs/initiatives aimed at organizations or companies with a digital business model?
- 50 - What projects/initiatives of ApexBrasil are focused on the dissemination or use of advanced digital technologies in companies to support internationalization?

Part 3

- 1 - Is there any relevant topic pertaining the subject of our discussion that you believe we should delve deeper?
 - 2 - Which other colleagues would you recommend me to reach out to in order to make this research more robust and relevant?
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