Agility or Scalability? Digitalisation Pathways among Australian Service Exporters

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Cite as:
Ahmed Farid (2026), Agility or Scalability? Digitalisation Pathways among Australian Service Exporters. *Proceedings of the European Marketing Academy*, 55th, (132246)

Paper from the 55th Annual EMAC Conference, Bath, United Kingdom, June 2-5, 2026

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Abstract

Digitalisation is widely recognised as a driver of firm internationalisation, yet its performance outcomes remain context dependent. This study examines how digitalisation capability influences export performance across two types of Australian service exporters: location-free professional services and standardised service package providers. Using survey data from 415 small and medium-sized enterprise (SME) service exporters and multi-group structural equation modelling, the findings show that digitalisation capability enhances export performance only indirectly and through different pathways for each service type. Location-free professional services benefit primarily from agility and collaboration, enabled by entrepreneurial and learning orientations and value co-creation, whereas performance gains for standardised service package providers stem from scalability and market responsiveness through international market orientation. The study provides evidence that digitalisation does not translate uniformly into performance but must be aligned with service characteristics, offering service-specific guidance for digital internationalisation strategies.

Keywords: Digitalisation, Export Performance, Service Internationalisation

Track: International Marketing

1. Introduction

Digitalisation is reshaping the way firms identify, enter and compete in international markets, transforming access to customers, coordination of value exchange and knowledge integration (Coviello et al., 2017; Vial, 2019; Wernerfelt, 1984). For service firms, where value creation relies heavily on customer interaction and knowledge-intensive processes, digitalisation can reduce geographic constraints, expand market reach and enhance export outcomes (Grönroos, 2016; Knight & Cavusgil, 2004; Zou & Stan, 1998). However, research remains inconclusive about whether investments in digitalisation consistently improve performance, as benefits appear contingent on contextual and strategic conditions (Bharadwaj et al., 2013; Parida et al., 2015; Sawy & Pavlou, 2008).

A limitation in current scholarship is that the service sector is frequently treated as homogeneous, despite strong evidence of divergent value-creation logics and internationalisation modes across service types (Grönroos, 2016; Javalgi & Martin, 2007). We address this gap by examining how digitalisation capability affects export performance in two archetypal service forms: location-free professional services (LFPS) and standardised service package (SSP) providers (La et al., 2005). These models represent distinct competitive logics – customisation and collaboration for LFPS, scalability and responsiveness for SSP. The objective of this research is to explain how digitalisation translates into performance through strategic orientations and co-creation mechanisms that differ across these service types.

2. Theoretical Background and Hypotheses

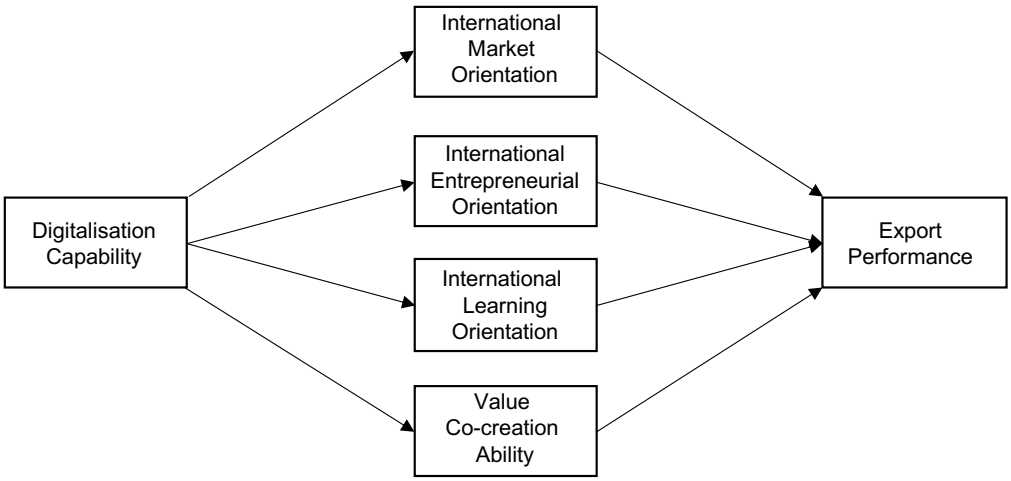
2.1. Digitalisation capability as a strategic and dynamic capability

Digitalisation capability reflects a firm's ability to leverage digital tools, skills and routines to sense opportunities, integrate knowledge and reconfigure resources (Bharadwaj et al., 2013; Vial, 2019). The Resource-Based View conceptualises digitalisation capability as a valuable, rare and difficult-to-imitate resource underpinning competitive advantage (Barney, 1991; Wernerfelt, 1984), whereas Dynamic Capabilities Theory highlights adaptive and transformative properties enabling continuous renewal (Eisenhardt & Martin, 2000; Teece, 2007). For service exporters, digitalisation capability provides the foundation for aligning digital systems with international strategic orientations and relational value creation (Brouthers et al., 2022; Nambisan et al., 2017).

2.2. *Service heterogeneity and digital export pathways*

Service internationalisation varies widely in terms of customisation, delivery mode and customer interaction (Grönroos, 2016; Patterson & Cicic, 1995). Location-free professional services rely on collaborative interaction and co-design, suggesting that digitalisation becomes performance-enhancing when it facilitates agility and learning. Standardised service package firms replicate scalable service modules across markets, suggesting that digitalisation pays off when it improves responsiveness, automation and standardisation (Katebi et al., 2025). These contrasting logics imply divergent digitalisation-to-performance pathways.

Figure 1: Service firm digitalisation capability and export performance



2.3. *Hypotheses*

H1: Digitalisation capability positively affects international entrepreneurial, learning and market orientations.

H2: Digitalisation capability positively affects value co-creation capability.

H3: Strategic orientations and value co-creation positively affect export performance.

H4: The indirect effect of digitalisation capability on export performance differs across location-free professional services and standardised service packages.

H4a: Location-free professional services performance benefits derive primarily from entrepreneurial and learning orientations and value co-creation.

H4b: Standardised service packages performance gains derive primarily from market orientation.

3. Methodology

A cross-sectional survey was conducted with 415 Australian SME service exporters

(≤200 employees) that had served at least one international client within the preceding three years. Location-free professional services and standardised service package firms were classified based on delivery characteristics and value-creation logic. Respondents were CEOs, founders or senior managers with direct knowledge of international operations.

Multi-item Likert scales with different response ranges were used for digitalisation capability, international entrepreneurial, learning and market orientations, value co-creation ability and export performance (Cadogan et al., 2002; Gnizy, 2019; Gong et al., 2023; Kara et al., 2005; Vargo & Lusch, 2004). Harman's one-factor test and the common latent factor approach indicated no substantial common method bias.

A two-step structural equation modelling approach was applied (Anderson & Gerbing, 1988). Measurement invariance across location-free professional services and standardised service packages groups was confirmed before comparing structural paths. Bias-corrected bootstrap confidence intervals were calculated for indirect effects.

4. Results

4.1. Measurement model

The measurement model shows good fit ($\chi^2 = 1383.19$, df = 1259, p = 0.007, CFI = 0.996, TLI = 0.996, RMSEA = 0.015, SRMR = 0.017). Convergent validity is first assessed by inspecting standardised factor loadings for all retained items. All loadings are highly significant ($p < 0.001$) and exceed the threshold of 0.70 (Hair et al., 2018), with most exceeding 0.90. The average variance extracted (AVE) values for all constructs exceed the recommended cutoff of 0.50 (Fornell & Larcker, 1981). The composite reliability (CR) values for all constructs are well above the 0.70 threshold (Bagozzi & Youjae, 1988), ranging from 0.903 (International Learning Orientation) to 0.991 (Value Co-creation Ability) (see Table 1). These results demonstrate strong internal consistency and measurement stability across constructs. The discriminant validity of the measurement model was evaluated using both the Fornell–Larcker criterion (Fornell & Larcker, 1981) and the HTMT ratio (Henseler et al., 2015). For the Fornell–Larcker criterion, the square root of AVE (diagonal elements in bold) is greater than the inter-construct correlations (off-diagonal values), confirming discriminant validity (Fornell & Larcker, 1981). For the HTMT test, all inter-construct correlation values are below the conservative threshold of 0.85 (Kline, 2023), further supporting discriminant validity.

Table 1: Correlation matrix and square root of AVE - measurement model

	CR	AVE	DC	ISM	ISE	ISL	VCC	EPS
1. Digitalisation Capability (DC)	0.988	0.862	**0.929**					
2. International Market Orientation (ISM)	0.973	0.797	0.504*	**0.893**				
3. International Entrepreneurial Orientation (ISE)	0.931	0.771	0.486*	0.431*	**0.878**			
4. International Learning Orientation (ISL)	0.903	0.823	0.492*	0.485*	0.39*	**0.907**		
5. Value Co-creation Ability (VCC)	0.991	0.844	0.557*	0.052	0.079	0.152*	**0.919**	
6. Export Performance (EPS)	0.956	0.845	0.564*	0.517*	0.507*	0.577*	0.571*	**0.919**

Note:
* $\rho < 0.05$
CR = composite reliability; AVE = average variance extracted.
Square root of AVE is presented on the diagonal. All AVE values exceed correlations.
Off-diagonal entries = inter-construct correlations (HTMT ratios). All HTMT ratios are below 0.85, confirming discriminant validity.

4.2. Structural model

The hypothesized structural model in Figure 1 was estimated using Mplus v8.10 (Muthén & Muthén, 2024). The data has a good fit to the proposed model for the overall sample (χ^2 = 1518.096, df = 1255, RMSEA = 0.022, CFI = 0.992, TLI = 0.991, SRMR = 0.089). The data also has a reasonable fit to the sub-group models (for location-free professional service, χ^2 = 1729.335, df = 1255, RMSEA = 0.058, CFI = 0.942, TLI = 0.939, SRMR = 0.164 and for standardised service package providers, χ^2 = 1480.120, df = 1255, RMSEA = 0.024, CFI = 0.989, TLI = 0.988, SRMR = 0.109), although the CFI (0.942) and TLI (0.939) for location-free professional services are slightly below the recommended 0.950.

The standardised loadings shown in Table 2 indicate strong empirical support for all hypothesized relationships between digitalisation capability, international strategy orientation (consisting of marketing, entrepreneurial and learning orientation) and value co-creation ability. Similarly, the relationships between international strategy orientation, value co-creation ability and export performance are statistically significant for both the overall sample and the cross-service sample.

The multi-mediator SEM with bias-corrected bootstrapping analysis suggests that digitalisation capability does not significantly affect export performance directly, but it significantly influences international entrepreneurial, learning and market orientations and value co-creation ability, which then positively influence export performance (as shown in Table 3).

Table 2: Multi-group analysis – standardised coefficients

	Overall Sample	**Location-free Professional Services**	**Standardised Service Package**
	$n = 415$	$n = 114$	$n = 301$
Digitalisation Capability → International Market Orientation	0.503 $\rho = 0.000$	0.353 $\rho = 0.000$	0.431 $\rho = 0.000$
Digitalisation Capability → International Entrepreneurial Orientation	0.482 $\rho = 0.000$	0.253 $\rho = 0.007$	0.425 $\rho = 0.000$
Digitalisation Capability → International Learning Orientation	0.486 $\rho = 0.000$	0.474 $\rho = 0.000$	0.323 $\rho = 0.000$
International Market Orientation → Export Performance	0.251 $\rho = 0.000$	0.246 $\rho = 0.000$	0.272 $\rho = 0.000$
International Entrepreneurial Orientation → Export Performance	0.244 $\rho = 0.000$	0.344 $\rho = 0.000$	0.238 $\rho = 0.000$
International Learning Orientation → Export Performance	0.272 $\rho = 0.000$	0.303 $\rho = 0.000$	0.299 $\rho = 0.000$
Digitalisation Capability → Value Co-creation Ability	0.553 $\rho = 0.000$	0.425 $\rho = 0.000$	0.412 $\rho = 0.000$
Value Co-creation Ability → Export Performance	0.471 $\rho = 0.000$	0.497 $\rho = 0.000$	0.491 $\rho = 0.000$

5. Discussion

The findings demonstrate that digitalisation is not inherently performance-enhancing; its value depends on how it complements a firm's service logic and competitive posture (Bharadwaj et al., 2013; Coviello et al., 2017; Vial, 2019). When examined by service type, the results reveal some differences in how digitalisation capability translates into export outcomes. For location-free professional services (n = 114), the indirect effects are international market orientation (β = 0.087), international entrepreneurial orientation (β = 0.087), international learning orientation (β = 0.144), and value co-creation ability (β = 0.211), with a total indirect effect of β = 0.529 ($p < 0.001$). In this group, value co-creation ability remains the dominant path (≈40% of total), but international learning orientation emerges as the next strongest mediator (≈27%). In contrast, for standardised service packages (n = 301), the indirect effects are international market orientation (β = 0.117), international entrepreneurial orientation (β = 0.101), international learning orientation (β = 0.096), and value co-creation ability (β = 0.202), with a total indirect effect of β = 0.517 ($p < 0.001$). Here, value co-creation ability again

contributes the most (≈39%), but international market orientation becomes the second-largest pathway (≈23%), highlighting the stronger role of market orientation in standardised services.

Table 3: Effects of digitalisation capability on export performance

Effects	**Overall Sample** $n = 415$	**Location-free Professional Services** $n = 114$	**Standardised Service Package** $n = 301$
Digitalisation Capability → International Market Orientation → Export Performance	0.126 $\rho = 0.000$	0.087 $\rho = 0.000$	0.117 $\rho = 0.000$
Digitalisation Capability → International Entrepreneurial Orientation → Export Performance	0.117 $\rho = 0.000$	0.087 $\rho = 0.014$	0.101 $\rho = 0.000$
Digitalisation Capability → International Learning Orientation → Export Performance	0.132 $\rho = 0.000$	0.144 $\rho = 0.000$	0.096 $\rho = 0.000$
Digitalisation Capability → Value Co-creation Ability → Export Performance	0.260 $\rho = 0.000$	0.211 $\rho = 0.000$	0.202 $\rho = 0.000$
Total indirect effect	0.636 $\rho = 0.000$	0.529 $\rho = 0.000$	0.517 $\rho = 0.000$

These findings confirm that digitalisation capability enhances export performance only when its effects are channelled through strategic orientations and relational value-creation mechanisms that fit the service logic. For LFPS, digitalisation supports agility and collaborative value co-creation, which are central to delivering high-customisation outcomes in global markets. For SSP providers, digitalisation supports scalability, responsiveness and rapid customer intelligence, which reinforce their efficiency-driven internationalisation logic. Thus, digitalisation capability delivers performance benefits not universally but conditionally — its value is maximised when digital investments are aligned with the competitive structure of the service offering rather than treated as a generic technological upgrade.

6. Conclusion, Limitations, and Future Directions

This study advances digitalisation research by demonstrating that digitalisation capability produces different performance outcomes depending on service context, resolving conflicting findings on digital investment returns (Bharadwaj et al., 2013; Sawy & Pavlou, 2008). It integrates Resource-Based View, Dynamic Capabilities Theory and Service-Dominant Logic

to explain distinct digitalisation–performance pathways across service types (Barney, 1991; Teece, 2007; Vargo & Lusch, 2004). By showing that digitalisation capability enhances export performance only through context-appropriate strategic orientations and relational mechanisms, the study positions digitalisation not as a universally advantageous resource, but as one whose value is contingent upon alignment with the firm's competitive logic. The findings further refine theory by demonstrating that the same digital investments can trigger learning- and agility-driven mechanisms in collaborative service settings, or scalability- and responsiveness-driven mechanisms in standardised service settings, thereby reinforcing the need to theorise digitalisation as a heterogeneous capability. The research also contributes to international marketing literature by evidencing that digitalisation capabilities support internationalisation through differentiated micro foundations rather than a single linear pathway, highlighting the value of multi-group SEM in uncovering boundary conditions in the digitalisation–performance relationship.

A universal digital strategy is ineffective for service-exporting SMEs because digitalisation enhances performance through different mechanisms depending on the firm's service logic. Location-free professional services (LFPS) achieve superior export outcomes when digital tools are deployed to strengthen collaboration, knowledge sharing and joint problem-solving with international clients, supporting agility and co-creation throughout the service delivery process. In contrast, standardised service package (SSP) providers benefit most when digitalisation priorities centre on scalable systems that enable process automation, rapid customer responsiveness and enhanced market intelligence to support high-volume replication across markets. These findings highlight the need for firms to tailor their digital investments to their competitive model rather than seeking broad, one-size-fits-all digital transformation.

This study is based on cross-sectional data from Australian SMEs; future studies could examine longitudinal changes, other economies or hybrid service types. Future research may explore digital transformation maturity, AI-driven value creation and micro-foundations of dynamic capabilities (Brouthers et al., 2022; Nambisan et al., 2017; Teece, 2007).

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