

# Digitalisation, Data Governance, and Cross-Border Commerce: New Directions for International Business Theory

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## ABSTRACT

Digitalisation has become a defining force in contemporary international business, reshaping how firms create value, access foreign markets, and coordinate cross-border activities. As digital technologies enable new forms of virtual internationalisation, platform-based global engagement, and data-driven decision-making, they challenge long-standing assumptions embedded in classical international business (IB) theory. At the same time, the rise of national and regional data governance regimes—encompassing data localisation laws, privacy regulations, and cybersecurity frameworks—introduces new institutional complexities that directly influence the feasibility and effectiveness of digitally enabled global expansion. This conceptual paper examines how the interaction between digitalisation, data governance, and cross-border digital trade mechanisms reshapes the logic of internationalisation in the digital era. Drawing on insights from digital trade research, institutional perspectives, and technology-enabled internationalisation literature, the paper develops an integrated conceptual framework that positions Global Market Expansion Capability (GMEC) as a contemporary outcome of digital-era globalisation. GMEC captures the digitally enabled agility with which firms identify, access, and scale across foreign markets under varying institutional conditions. The paper contributes to IB theory by explaining how digital capabilities, digital regulatory complexity, and digitally mediated trade pathways jointly determine international expansion patterns. Directions for future research are proposed to guide empirical validation and theoretical refinement.

**Keywords:** Digitalisation; Data Governance; Cross-Border Digital Trade; Global Market Expansion Capability; International Business Theory

## INTRODUCTION

Digitalisation has become one of the most transformative forces reshaping the architecture of contemporary global economic activity. Rapid advances in artificial intelligence, digital platforms, cloud computing, data analytics, and cross-border digital infrastructures have redefined how firms create value, coordinate operations, and interact with foreign markets (Jones, 2023; Meyer, 2023; OECD, 2025; Sun & Trefler, 2023). Unlike earlier phases of globalisation—driven primarily by the physical movement of goods, capital, and labour—the current era is characterised by the rapid circulation of data and digitally mediated transactions that transcend geographic constraints (Klügl, 2025; OECD, 2025). As international business (IB) increasingly revolves around digital exchanges, the ability of firms and nations to participate in digital trade, manage cross-border data flows, and navigate emerging digital regulatory regimes has become a central determinant of global competitiveness (Sun & Trefler, 2023; Jones, 2023).

Yet, despite this profound structural shift, much of international business theory remains rooted in assumptions developed during the industrial era. Classical IB frameworks such as Dunning's eclectic (OLI) paradigm, the Johanson & Vahlne internationalisation model, and traditional theories of foreign direct investment (FDI) were constructed at a time when physical distance, asset-heavy internationalisation, and host-country institutional

embeddedness were the dominant constraints shaping foreign expansion (Dunning, 2001; Johanson & Vahlne, 2009; Rugman & Verbeke, 2001; Wright et al., 2005). These theories provide limited explanatory power for a world in which firms can internationalise virtually, scale globally through platform ecosystems, and build competitive advantage from digital capabilities rather than physical investments (Buckley & Munyua, 2019; Lewin et al., 2019). This mismatch between digital-era globalisation and industrial-era IB theory exposes a widening conceptual gap that demands renewed scholarly attention (Cavusgil et al., 2020).

A key dimension of this new landscape is the strategic importance of data governance, which has emerged as a critical institutional force shaping digital-era internationalisation. Governments worldwide are introducing data localisation requirements, cross-border data-flow rules, privacy regulations, and cybersecurity frameworks that directly influence how firms engage in cross-border digital commerce (Cory & Dascoli, 2021; Liu, 2025; Kaya & Shahid, 2025). These regulatory differences—often inconsistent, overlapping, or fragmented—create new institutional pressures that international firms must navigate (Liu, 2025; Cory & Dascoli, 2021; ISACA, 2024). Consequently, the feasibility and effectiveness of digital expansion increasingly depend not only on technological capability, but also on regulatory compatibility across jurisdictions (ISACA, 2024; Kaya & Shahid, 2025).

Against this backdrop, it becomes essential to re-examine international business theory through the lens of digitalisation and data governance. This conceptual paper investigates how the interplay between digitalisation, data governance, and cross-border digital trade challenges long-standing IB assumptions and necessitates new theoretical directions. By synthesising insights from digital trade research, institutional theory, and the emerging literature on technology-enabled internationalisation, this paper develops an integrated conceptual perspective on how digital-era forces reshape international strategy and global market engagement.

## **Literature Overview: Digitalisation, Data Governance, And International Business**

Digitalisation has become a defining feature of the contemporary international business environment, transforming how firms create value, access foreign markets, and coordinate cross-border activities. In the IB domain, digitalisation refers to the integration of advanced digital technologies—such as artificial intelligence, digital platforms, cloud computing, big data analytics, and embedded digital infrastructures—into global operations (Meyer, 2023; Zhang & Wang, 2025; OECD, 2025; Wu, 2025). These technologies reduce reliance on physical assets and enable firms to operate internationally through virtual channels, real-time information flows, and algorithmically coordinated processes (Meyer, 2023; Borojo & Weimin, 2025; Zhang & Wang, 2025; Wu, 2025). As such, digitalisation challenges the traditional assumptions of incremental foreign expansion, spatial distance, and host-country embeddedness that shaped earlier internationalisation theories (Meyer, 2023; Zhang & Wang, 2025; OECD, 2025; Wu, 2025). Emerging research increasingly recognises that the capacity to leverage digital resources has become central to a firm's ability to build and sustain global presence (Borojo & Weimin, 2025; Meyer, 2023; OECD, 2025; Zhang & Wang, 2025).

Parallel to the rise of digitalisation is the growing significance of data governance as an institutional force that shapes international business activities. Data governance encompasses the policies, regulations, and standards governing the collection, storage, movement, and protection of data across borders (Burri, 2023; Meltzer & Mattoo, 2024; APEC, 2024). This includes data localisation requirements, privacy laws such as the GDPR, crossborder data-flow rules, and cybersecurity regulations that increasingly determine how firms design their global digital operations (Meltzer & Mattoo, 2024; Ferracane & van der Marel, 2023). Unlike traditional trade policy—focused mainly on tariffs or investment restrictions—data governance regulates the *intangible* foundations of the digital economy, making regulatory variation across countries a major determinant of international business strategy (Burri, 2023; Chen & Zhang, 2024). As a result, data governance influences where digital infrastructures are located, how digital services are delivered, and which cross-border digital business models are feasible across jurisdictions (APEC, 2024; Ferracane & van der Marel, 2023).

Digitalisation has also reshaped the meaning and scope of cross-border commerce. Whereas traditional IB literature conceptualised cross-border transactions as the exchange of goods and services through physical channels, digital technologies have given rise to digitally mediated trade that operates through platform

ecosystems, remote digital service delivery, and data-driven value networks (UNCTAD, 2023; López-González & Jouanjean, 2017). This includes cross-border e-commerce, digital services delivered remotely, cloud-enabled business models, and the movement of data-intensive services across jurisdictions, all of which reduce conventional foreign-market entry barriers and enable firms—particularly SMEs—to internationalise rapidly with limited physical presence (WTO, 2024; Mukherjee, 2022). These new digital trade mechanisms facilitate global value creation based on digital connectivity rather than logistics-heavy supply chains, enabling firms to scale through virtual channels and global platforms (UNCTAD, 2023; López-González & Jouanjean, 2017; Mukherjee, 2022). The emergence of digitally driven commerce signals a shift from physical to digital globalisation, expanding the conceptual boundaries of international business beyond what traditional theories anticipated (WTO, 2024; van der Marel, 2023).

However, traditional IB theories were formulated under conditions of physical globalisation and are therefore limited in explaining digital-era internationalisation. The eclectic (OLI) paradigm assumes that ownership, location, and internalisation advantages are grounded in physical assets and host-country characteristics, which does not fully capture digitally enabled value creation or virtual market entry (Dunning, 2001; Narula, 2019). Similarly, the Uppsala model conceptualises internationalisation as a gradual, experiential process, overlooking the possibility that digital firms can internationalise rapidly with minimal physical presence or experiential learning (Johanson & Vahlne, 2009; Coviello et al., 2017). Transaction cost theory also presumes asset specificity and governance structures tied to physical coordination, providing incomplete explanations for platform-mediated interactions, data-driven scaling, and algorithmic governance (Williamson, 1985; Luo, 2022). Taken together, these limitations reveal that classical IB frameworks contain structural blind spots when applied to digitally enabled business models, demonstrating the need for frameworks that integrate digital capabilities, digital infrastructures, and data-driven mechanisms of global engagement (Narula, 2019; Coviello et al., 2017).

Recent scholarship has begun to highlight the limitations of traditional IB approaches in capturing digital-era dynamics. Digital firms distinguish themselves not through incremental market entry or physical presence, but through network effects, algorithmic scaling, and global user integration (Autio et al., 2021; Stallkamp & Schotter, 2021). Digital value creation relies more on data assets, platform governance, and digital ecosystems than on traditional firm-specific advantages, shifting the foundations of competitive advantage in international markets (Chen et al., 2022; Buenstorf & Geissinger, 2023). Digital infrastructure quality, interoperability, and regulatory alignment increasingly serve as substitutes for classical location advantages, enabling firms to scale internationally through virtual architectures rather than physical subsidiaries (Stallkamp & Schotter, 2021; Luo, 2022). Most importantly, institutional differences in data governance—rather than cultural, political, or economic distance—have emerged as key determinants of internationalisation feasibility, as firms must navigate divergent regimes governing data flows, cybersecurity, and digital sovereignty (Burri, 2023; Meltzer & Mattoo, 2024). These developments underscore the need for updated theoretical perspectives that incorporate digital capabilities and digital institutional contexts as central drivers of international business.

Taken together, the literature on digitalisation, data governance, and digital trade highlights a significant conceptual gap: while individual streams recognise the transformative effects of digital technologies and regulatory dynamics, there is limited theoretical integration explaining how digitalisation interacts with digital regulatory environments to shape international business outcomes (Meyer, 2023; Feliciano-Cestero et al., 2023; Purtova & van Maanen, 2022). This gap is particularly evident in the absence of frameworks linking technological capability, data governance regimes, and digitally enabled global expansion (Chandra, 2023; Klaes & McIntyre, 2024). The present paper responds to this gap by proposing an integrated conceptual model that positions Global Market Expansion Capability as a contemporary outcome of technology-driven internationalisation shaped by crossborder digital trade mechanisms and institutional data governance dynamics (Meyer, 2023; Oikawa et al., 2025).

### **Conceptual Discussion: How Digitalisation Reshapes International Business**

Digitalisation profoundly transforms the mechanisms through which firms participate in international business by reshaping how value is created, delivered, and coordinated across borders. Unlike traditional globalisation—rooted

in the physical movement of goods, capital, and people—digital globalisation operates through intangible assets such as data, algorithms, cloud infrastructures, and platform ecosystems (Autio et al., 2021; Chen et al., 2022; Luo, 2022; UNCTAD, 2023). These digital elements compress geographic distance, accelerate market interactions, and enable firms to engage internationally with speed and scalability that traditional IB models did not anticipate (Stallkamp & Schotter, 2021; Autio et al., 2021; UNCTAD, 2023). As a result, digitalisation introduces new internationalisation logics that challenge long-standing assumptions regarding incremental foreign market entry, host-country embeddedness, and resource-heavy global expansion (Chen et al., 2022; Luo, 2022; Autio et al., 2021).

One of the most significant shifts introduced by digitalisation is the rise of virtual and platform-based internationalisation. Digital platforms and cloud-based service architectures allow firms to establish a global presence without the physical investments traditionally required for foreign market entry (Stallkamp & Schotter, 2021; Cusumano et al., 2021; Luo, 2022). This lowers transaction costs and reduces uncertainty, enabling even small firms to internationalise rapidly and at scale (Coviello et al., 2017; Autio et al., 2021; Chen et al., 2022). Platform-mediated reach further allows firms to access global demand, coordinate dispersed users, and build network effects that accelerate their international positioning (Cusumano et al., 2021; Buenstorf & Geissinger, 2023; Stallkamp & Schotter, 2021). These dynamics undermine the conventional IB view that firms expand cautiously and sequentially, showing instead that digital-first firms can be “born global” through digitally enabled market access (Autio et al., 2021; Coviello et al., 2017).

A second transformation arises from the increasing centrality of data as a strategic resource in cross-border commerce. Data-driven insights allow firms to understand foreign customers, optimise logistics, personalise offerings, and allocate resources algorithmically across markets (OECD, 2021; Goldfarb & Trefler, 2018; Manyika et al., 2021). This elevates data from a mere operational input to a cross-border competitive asset. Yet because data flows are transnational, digitalisation exposes firms to institutional pressures tied to privacy, localisation, cybersecurity, and digital sovereignty (UNCTAD, 2023; Meltzer, 2023). Countries now regulate data as an economic and geopolitical resource, compelling firms to navigate complex and often conflicting data governance regimes (Cory & Dascoli, 2021; Ferracane & van der Marel, 2023). Thus, data governance becomes a central element of IB strategy: it determines where digital assets can be stored, how digital services can be delivered internationally, and what forms of digital business models are permissible in each jurisdiction (UNCTAD, 2023; Ferracane & van der Marel, 2023).

Digitalisation also introduces new forms of global business risk that differ from classical IB risk categories. Whereas traditional IB emphasised political instability, exchange-rate fluctuations, and cultural differences, digital-era risks include cybersecurity breaches, algorithmic vulnerabilities, digital fraud, platform dependency, and intellectual property theft (ENISA, 2024; ISACA, 2024; World Economic Forum, 2023). These risks stem from the very infrastructures that enable digital expansion. Moreover, digital risks vary across national regulatory contexts, creating uneven exposure for firms operating internationally (Burri, 2023; Meltzer & Mattoo, 2024). This adds a new layer of institutional uncertainty that firms must incorporate into their international strategies, highlighting that technological capability alone is insufficient without parallel investments in digital trust, cybersecurity resilience, and institutional compliance (ENISA, 2024; World Economic Forum, 2023; ISACA, 2024).

Digitalisation reshapes global value chain (GVC) architectures by enabling virtual and data-driven coordination across dispersed production networks. Whereas traditional GVCs depended on logistics-intensive production hubs and physical supply chains, digitalisation introduces alternative configurations such as digital service chains, cloud-based coordination, and platform-mediated production ecosystems (Gereffi, 2020; UNCTAD, 2023; De Backer & Flaig, 2022). These digitally integrated value chains place new emphasis on the quality of digital infrastructure, interoperability of data ecosystems, and regulatory compatibility across jurisdictions (OECD, 2021; van der Marel, 2023). Consequently, location advantages shift from traditional cost-based factors toward digital connectivity, cybersecurity standards, and institutional support for data mobility (Gereffi, 2020; OECD, 2021).



Digitalisation also transforms the concept of institutional distance. While classical IB emphasised cultural, economic, and political distance, digital globalisation foregrounds “digital institutional distance”—variation in data governance regimes, digital infrastructure maturity, cybersecurity enforcement, and digital regulatory models (Chen & Zhang, 2024; Burri, 2023; Meltzer & Mattoo, 2024). These differences can either facilitate or obstruct cross-border digital activity even when physical trade barriers are minimal. For instance, stringent data localisation rules or incompatible digital standards can inhibit firms from scaling digitally across markets, making digital institutional distance a powerful determinant of internationalisation feasibility (Cory & Dascoli, 2021; Ferracane & van der Marel, 2023).

Finally, digitalisation fuels new competitive dynamics in global markets. Digital firms benefit disproportionately from scale economies, network effects, and platform governance mechanisms that traditional firms cannot easily replicate (Autio et al., 2021; Stallkamp & Schotter, 2021). Competitive advantage in this environment becomes closely tied to digital capabilities such as algorithmic optimisation, platform orchestration, and data-driven innovation (Chen et al., 2022; Buenstorf & Geissinger, 2023). These dynamics challenge classical notions of firmspecific advantages by demonstrating that digital capabilities—not physical assets—are increasingly central to international competitiveness (Narula, 2019; Luo, 2022). Importantly, such digitally enabled advantages directly influence a firm's capacity to expand its global presence, reinforcing the relevance of Global Market Expansion Capability (GMEC) as a contemporary internationalisation outcome (Autio et al., 2021; Chen et al., 2022).

Overall, digitalisation, data governance, and cross-border digital trade collectively reshape international business through new mechanisms of internationalisation, new risk structures, evolving institutional constraints, and reconfigured competitive dynamics. These transformations highlight why updated conceptual models are necessary to capture the realities of digital-era global expansion and to address the theoretical limitations of legacy IB frameworks.

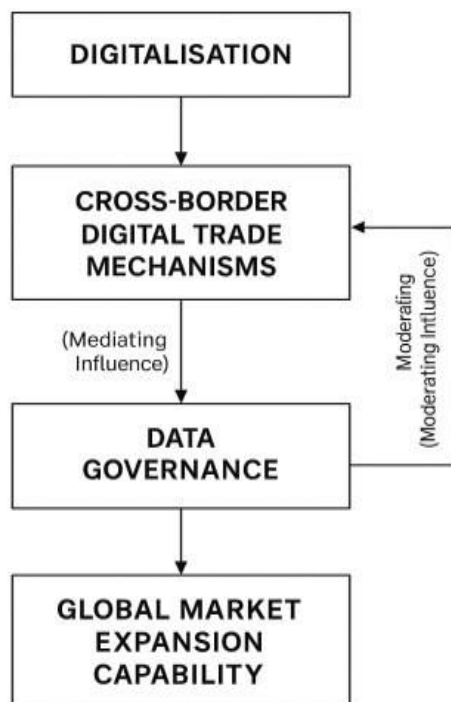
### **Proposed Conceptual Framework and Propositions**

The proposed conceptual framework in Figure 1 positions digitalisation as a transformative force that fundamentally restructures the conditions under which firms engage in international business. Digitalisation enables firms to deploy data-driven processes, cloud-based infrastructures, algorithmic decision systems, and platform-mediated access to reconfigure their interaction with global markets (Autio et al., 2021; Luo, 2022; Chen et al., 2022; UNCTAD, 2023). However, the extent to which these technological capabilities translate into meaningful international expansion is neither automatic nor uniform, as digitalisation outcomes remain contingent on institutional and regulatory environments (Narula, 2019; Stallkamp & Schotter, 2021). In this regard, crossborder digital trade mechanisms represent the operational pathways through which digitalisation is translated into international activity. These mechanisms include platform-based foreign market entry, digitally delivered services, cross-border e-commerce, and integrated digital marketplaces, which collectively allow firms to reach global markets with minimal physical presence, lower risk, and accelerated speed (WTO, 2024; OECD, 2021; UNCTAD, 2023). Together, these processes constitute the mediating channels that convert digital capabilities into crossborder engagement.

At the same time, data governance acts as a decisive institutional moderator that conditions how effectively digitalisation supports global expansion. Because digital trade relies fundamentally on the frictionless movement of data, firms must operate within diverse regulatory environments governing data localisation, privacy protection, cybersecurity, and cross-border data flows (Burri, 2023; Meltzer & Mattoo, 2024; Ferracane & van der Marel, 2023). These regulatory differences create institutional asymmetries that influence the extent to which firms can leverage digital capabilities internationally (Chen & Zhang, 2024; Cory & Dascoli, 2021). Restrictive or fragmented data governance regimes can impose compliance burdens, limit data mobility, and constrain digital service delivery, thereby dampening the potential benefits of digitalisation (Ferracane & van der Marel, 2023; Burri, 2023). Conversely, harmonised, transparent, and interoperable data governance frameworks enhance the translation of digital capabilities into strategic internationalisation advantages, strengthening the relationship between digitalisation and cross-border digital engagement (Meltzer & Mattoo, 2024; APEC, 2024).

**Figure 1: Conceptual Framework**

**Proposed Conceptual Framework**



The combined effects of digitalisation, cross-border digital trade mechanisms, and data governance converge in the outcome construct of Global Market Expansion Capability (GMEC). GMEC is conceptualised as a multidimensional capability reflecting a firm’s ability to identify, access, penetrate, and sustain competitive presence in foreign markets under conditions of digital globalisation (Autio et al., 2021; Narula, 2019; Chen et al., 2022). It captures the digitally enabled agility with which firms can expand their international footprint, scale market reach, coordinate global activities, and adjust to varying institutional landscapes (Stallkamp & Schotter, 2021; Buenstorf & Geissinger, 2023). Unlike traditional internationalisation outcomes—often measured through physical presence, foreign investment, or experiential learning—GMEC reflects digital-era expansion, where global reach can occur rapidly, virtually, and with fewer resource commitments (Chen et al., 2022; Luo, 2022). In this sense, GMEC represents a contemporary international business outcome grounded in technological capability, institutional navigation, and digitally mediated global engagement (Narula, 2019; Autio et al., 2021).

From this conceptual logic, several propositions emerge. First, greater levels of firm-level digitalisation are expected to enhance GMEC by enabling more efficient global opportunity identification, reducing traditional entry barriers, and facilitating algorithmically optimised cross-border coordination (Meyer, 2023; Autio et al., 2021; OECD, 2021). Second, data governance moderates this relationship, such that digitalisation yields stronger market expansion benefits in regulatory environments characterised by data interoperability, transparency, and supportive digital trade policies (Burri, 2023; Meltzer & Mattoo, 2024). Third, cross-border digital trade mechanisms mediate the influence of digitalisation on GMEC, suggesting that technological capability only translates into global expansion when operationalised through digital commerce channels and platform-based international access (WTO, 2024; López-González & Jouanjean, 2017). Finally, the full effect of digitalisation on global expansion emerges when firms strategically navigate institutional digital constraints and leverage digital trade infrastructures to achieve scalable and sustainable international growth (UNCTAD, 2023; OECD, 2021; Mayer, 2023).

Overall, the conceptual framework advances international business theory by demonstrating how the interaction between digitalisation and data governance structures contemporary paths to global expansion. It shows that

digital-era internationalisation is shaped not solely by technological capability, but by the institutional regimes governing data mobility and the operational mechanisms through which digital trade is enacted (Burri, 2023; Narula, 2019; Meltzer & Mattoo, 2024). This provides a theoretically updated understanding of how firms build and sustain global competitiveness in an environment where digital technologies and digital institutions jointly define the new logic of international business (Autio et al., 2021; Chen et al., 2022).

## CONCLUSION AND DIRECTIONS FOR FUTURE RESEARCH

This conceptual paper has examined how digitalisation, data governance, and cross-border digital trade reshape the foundations of international business in the digital era. The analysis demonstrates that digitalisation is not merely an operational enhancement but a structural force that reconfigures the logic of international engagement, enabling firms to expand globally through virtual infrastructures, platform ecosystems, and algorithmic coordination mechanisms (Autio et al., 2021; Chen et al., 2022; Luo, 2022). At the same time, the capacity of firms to transform digital capabilities into meaningful international outcomes is fundamentally conditioned by the institutional architecture of data governance (Burri, 2023; Meltzer & Mattoo, 2024). As countries introduce increasingly complex and divergent regulations governing data mobility, privacy, localisation, and cybersecurity, the feasibility and strategic value of digital internationalisation becomes uneven and institutionally mediated (Ferracane & van der Marel, 2023; Cory & Dascoli, 2021). This institutional heterogeneity signals a shift away from the traditional assumption of uniform global integration toward a landscape defined by asymmetrical digital opportunity structures (UNCTAD, 2023; Narula, 2019).

The conceptual framework proposed in this paper advances international business theory by integrating digitalisation as an enabling force, cross-border digital trade mechanisms as the operational conduit, and data governance as the institutional moderator shaping digital-era internationalisation outcomes. Central to this framework is the construct of Global Market Expansion Capability (GMEC), which captures the digitally enabled agility with which firms identify, access, and scale across foreign markets (Autio et al., 2021; Stallkamp & Schotter, 2021). GMEC reflects contemporary globalisation dynamics, where competitive advantage stems not from physical presence or resource-heavy internationalisation, but from digital connectivity, algorithmic scalability, and institutional adaptability (Buenstorf & Geissinger, 2023; Chen et al., 2022). By articulating the relationships between digital capability, digital regulatory complexity, and digitally mediated commerce, the framework provides a theoretically updated lens for understanding how firms compete and expand internationally in the digital era (Narula, 2019; Meltzer & Mattoo, 2024).

Given the conceptual nature of this study, several promising avenues for future research emerge. Empirical research could evaluate the extent to which different forms of digitalisation—such as platform integration, data analytics capability, cloud infrastructure adoption, or AI-enabled decision-making—contribute uniquely to GMEC across industries and firm types (Chen et al., 2022; Autio et al., 2021). Comparative studies could examine how variations in national data governance regimes produce uneven digital opportunities, shaping internationalisation outcomes for both multinational enterprises and digital-native SMEs (Burri, 2023; Meltzer & Mattoo, 2024). Future research might also explore how firms strategically navigate conflicting or restrictive data regimes, and how such institutional navigation shapes long-term global performance in digital markets (Cory & Dascoli, 2021; Ferracane & van der Marel, 2023). Additionally, longitudinal analyses could investigate whether digitalisation leads to sustained global market presence or merely accelerates early-stage expansion without fostering durable international embeddedness (Narula, 2019; Stallkamp & Schotter, 2021). Addressing these questions would extend empirical understanding of the mechanisms articulated in this framework and contribute to a richer and more contemporary theory of international business.

Overall, this paper underscores the need to rethink international business theory considering the technological and institutional forces that define digital globalisation. By conceptualising how digitalisation interacts with data governance and cross-border digital trade mechanisms to influence global market expansion capability, this study provides a foundation for further theoretical refinement and empirical investigation into the dynamics of international business in the digital age.

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