

# *Digital Transformation and International Business Theory*

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**Abstract:** The rapid growth of information and communication technologies has changed the the entire internationalization process of enterprises. As firms launch digital transformation schemes, scholars researched and revised the international business theory according to real-life business practice. These researches provided profound insight for various aspects in the field of international business. Based on recent researches of international business theory, this article conducted a generic literature review on the field of firm special advantages (FSA), expansion strategy and global value chain (GVC). The aim is to figure out how the digitalization trend has reshaped the foundation of international business theory. After a thorough analysis and examination, the author proposed several constructive advice for the future practice of internalization under the digital environment.

## **1. Introduction**

The consistent stride of information and communication technology (ICT) has reshaped the way enterprises operate, scale and communicate in the recent few decades. Many firms eagerly launched digital transformation initiative in order to keep up with the trend and reach potential customers. Simultaneously, consulting firms are constantly asked to develop digital transformation schemes for companies from radically different industries and sectors. The growing trend of digital transformation not only influenced the entire internationalization process, but also also challenged the foundation of international business theory.

Digital transformation is defined by scholars as “the process of transforming the essence of an organization's product, service, and process into Internet compatible data packages that can be created, stored, and transferred in bits and bytes, along with the information associated with them, for marketing, sales, and distribution”.<sup>[1][2]</sup> Technologies such as big data analysis, social media, cloud, artificial intelligence, and machine learning has become the driving forces of digitization.<sup>[3]</sup> Scholars in the field of international business tend to focus on service-intensive companies and born digital firms, since they have less physical asset, therefore able to internationalize at a faster pace<sup>[4][5]</sup>.

Most researches in the field of internalization theory aim to provide a way to explain and predict why and how firms' boundaries stretch across national borders<sup>[6]</sup>. Banalieva and Dhanaraj<sup>[3]</sup> built on previous literature, suggesting that an MNC's international growth is governed by the costs and benefits of internalizing markets in foreign countries.

In order to figure out how the trend of digital transformation has influenced internationalization theory and practice and the resources of such influence. This article will first conduct a general literature review of different topics among the international business theory, such as FSA, value chain and expansion strategy. Then, a thorough literature review and analysis of how the international business theory has been changing under the universal trend of digital transformation.

## 2. Transfer of FSA

FSA is one of the most frequently studied topics in the field of international business. The concept of FSA is at the foundation of internalization theory's development. Rugman and Verbeke<sup>[7]</sup> defined FSA as "knowledge bundles that can take the form of intangible assets, learning capabilities and even privileged relationships with outside actors".

Scholars categorized FSAs into different types. Generally, FSAs are viewed as two types of advantages: asset-based ownership advantages such as product innovations, marketing capabilities and privileged relationships. As well as transaction-based ownership advantages which emerge from economies of common governance and cross-border coordination.<sup>[8][9]</sup>

Banalieva& Dhanaraj<sup>[3]</sup> proposed that FSAs can be divided into technology FSAs and human capital FSAs. In terms of technology FSAs, Langlois<sup>[10]</sup> and Hennart<sup>[11]</sup> researched on modularity to measure how easy a firm can integrate its FSA or bundle it with the assets of potential local partners. Modularity enables multinational firms to deliver value to their customers. Under the circumstance of digital platforms, this concept is called modular systems. It enables SMNCs (digital service multinational enterprises) to leverage complementary assets from local firms. They also stated that core technologies are of great importance to competitive advantages. While in terms of human capital FSA, advanced skills are more valuable, and human capital FSAs could better function if locus of control are fully centralized.<sup>[12][13]</sup>

In terms of the FSA integration under the digitalization environment, Banalieva& Dhanaraj<sup>[3]</sup> took the case of McKinsey and Uber to study technology and human capital FSA. In their study, they proposed that McKinsey's FSA is strongly dependent on human capital to create value for its customers. The value of the technology component, if without specific human capital, is low for the consulting company. On the contrary, Uber is strongly dependent on technology to create and maintain the digital platform. They draw the conclusion that decomposability of the FSA into technology and human capital components depends on the knowledge attributes.

For technology FSAs, digitalization increases its cross-border transferability by enhancing its modularity and the firm's ability to bundle them with a local firm's FSA. Also, digitalization enhances the firm's ability to integrate complex technology. As for human capital FSAs, digitalization increases a firm's ability to bundle its advanced and generic human capital FSAs through the digital platform. Banalieva& Dhanaraj<sup>[3]</sup> also proposed that digitalization increases the firm specificity of advanced human capital skills, it reduces the firm specificity of generic human capital skills.

## 3. Expansion strategy

The Integration-Responsiveness (IR) framework is by far the most adopted expansion strategy theory in academic research and in business practice. It emerged based on two fundamental dimensions experienced by the company in the international expansion process. One is pressure for global integration and the other is pressure for local responsiveness. Pressure for global integration are factors that that decide the arrangement of resources across national borders, which maximize the economy of scale advantage for the organization. These activities are unified across the organization and designed to be adopted in the target market. Pressure for local responsiveness are

factors that are designed for the context of the target market. These activities and decisions are made to respond to the local market conditions, independent of the overall strategic of other business units within the organization.<sup>[14]</sup> The core idea of the I-R framework is that companies operating across multiple markets have to balance the need to be responsive to local competition imposed by government regulation and local demands (local responsiveness), and on the other hand, also exploit market imperfection due to the firm's multiple country locations (global integration)<sup>[14]</sup>. Tan<sup>[15]</sup> summarize previous researches, proposed that there are three primary factors in international markets that have an impact on the mode of entry: (1) the CAGE distances between a host country and the firm's home country<sup>[16]</sup>; (2) the degree of regulatory restriction in the host country and its influence on cross-border acquisitions<sup>[17]</sup>; and (3) the presence of local competition in the host market.<sup>[18][19]</sup>

Under such circumstance, Tan<sup>[15]</sup> identified two factors, technology adoption and diffusion of digital innovation, based on the earlier case studies, that are likely to have major effect on the choice of market entry when expanding internationally in today digital context. Several findings were generated in this study. First, great number of mobile applications strengthen the firm's ability to localize their brand messages and customer acquisitions, therefore increasing the likelihood of acquisition as the choice for market entry. Second, Tan<sup>[15]</sup> also revealed significant effect between the firm market penetration strategy and its interaction with the industry operating characteristics, resulting in the selection of acquisition as the preferred mode of entry into the foreign market. Third, Tan has expanded Autio<sup>[20]</sup> and Brouters et al<sup>[21]</sup>'s theory, as they suggested that speed of international expansion lead to significant differentiation advantage to the transfer of knowledge and allocation of resources across international borders. Fourth, the current multinational e-business platforms enable firms to access potential markets and customers more easily. Fifth, adoption of mobile applications by the firm and resulting in choosing acquisition as the preferred mode of market entry. Firms whose operations are information-driven and who market themselves directly to end consumers will see a greater effect of technology and its decision of greenfield venture as its choice for international expansion.

#### 4. Global value chain

Global value chain (GVC) has become an increasingly important aspect for the growth or even existence of MNCs. According to UNCTAD EURA database, approximately 60 percent of global trade today comprises of trade in intermediate goods and services that are incorporated at multiple levels of the production networks for final consumption. GVC has occupied a significant place in understanding the trend of global communication<sup>[22]</sup>. In Gopalan's study, they dealt with the relationship between digitalization of firms and their participation in GVCs by using firm-level data for a sample of 24,839 firms across 52 emerging and developing economies spanning the period 2006–2018. The empirical findings show that digitalization attempts by firms positively influence their GVC participation.

They proposed that firms adopting digitalization through the usage of internet and website are 6–10 percent more likely to participate in GVCs. They highlight the significance of digitalization for financially constrained firms' intention to participate in global production chains.

#### 5. Conclusion

This essay has conducted a throughout investigation about how the digitalization trend reshape internationalization process and the international business theory. Traditionally, MNCs are defined by investment of physical assets abroad. Nowadays, digital technologies enable MNCs to exchange information and enter foreign markets through digital networks. Thus, in the digital age, an MNC

can be born digital by providing their products and services to global consumers with online platforms. The concept of place shifts from physical, territorial attributes to digital, information flow-based characteristics<sup>[23]</sup>. The firm is also no longer just a standalone entity<sup>[24]</sup>.

Therefore, scholars revised international theory according to such trend including transfer of FSA, expansion strategy and global value chain. Digitalization has become a driving force of decomposing FSA into technology and human resources FSA, enabling firms to bundle them with local firms. Great amount of technology used also means the intention to choose green field investment when it comes to expansion strategy. As well as a tendency to involve deeper into global value chain.

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