

Contemporary Issues in International Business and Entrepreneurship

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Edited by

Lasse Torkkeli

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INTERNATIONAL BUSINESS AND ENTREPRENEURSHIP IN THE 21ST CENTURY

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The first two decades of the 21st century have seen international business and entrepreneurship around the world grapple with global developments from the terror attacks to financial crises, from Brexit to the policies of Donald Trump as the president of the United States. Long-term global challenges such as those presented by the changing climate have been complemented with technological progress from sustainable technologies to digitalization of products and services. The latest major global development at the time of this writing in early 2021 is the ongoing COVID-19 pandemic which has, according to United Nations Conference on Trade and Development (UNCTAD, 2021) over the past year resulted in a decrease of over 40% in global foreign direct investment (FDI). The pandemic and its accompanying restrictions on global trade and on entrepreneurs has already had a major impact for research in international business (Caligiuri et al., 2020; Verbeke & Yuan, 2021) and in entrepreneurship (Shepherd, 2020; Zahra, 2020).

Indeed, the world of contemporary international business and entrepreneurship is dynamic and ever-changing, impacted by digitalization of societies and businesses, by the rise of environmental entrepreneurship and international business practices in response to climate change, and by the increasing volume of immigrant entrepreneurship due to increasing global migration, just to name a few of the key long-term phenomena. Research on international business and international entrepreneurship has done its best to keep up with these changing realities, but much remains to be done. For instance, we have not had a clear picture on how new emerging technologies, such as the internet of things, artificial intelligence or blockchain will

impact the ways in which multinational enterprises and international entrepreneurs will do business through the 21st century. We similarly have not had clear explanations for the dynamics of industry emergence or individual sensemaking in the domains of international business and entrepreneurship.

Bringing together contributions from some of the brightest young minds in international business and entrepreneurship research today, this volume ventures into these timely domains. We shed light on timely phenomena such as digitalization and digital platforms, cleantech, internet of things, migrant entrepreneurs, and the nature of global trade in this new reality, among other timely topics.

This book is structured in three main sections as follows: The first part of the book focuses on the impact that digitalization is having on research and practice in international business and entrepreneurship. Valtteri Kaartemo starts off our exploration by asking the very contemporary question of, “How will advances in technology and computer science, i.e. artificial intelligence, blockchain technology, and augmented reality, change international business?”, and reports a Delphi study where both scholars and practitioners of international business and entrepreneurship weigh in on the question. His findings indicate that there are differences of opinions between practitioners and researchers on which technologies will be more impactful to international business and entrepreneurship. The results of this study will enable future efforts to focus more clearly on the technologies that are likely to have the biggest impact on both research and practice.

Elisa Aro and Eini Haaja continue from there with their study on digital platform providers. International business and entrepreneurship research have been surprisingly slow to take on this topic, considering the fact that digital platforms enable rapid internationalization, can disrupt entire industries, and tend to result in new types business models for entrepreneurs and businesses in general. The chapter examines a joint digital platform development project by a group of SMEs, explaining how sensemaking in a joint digital platform development works. In addition, the chapter provides an illustration of a “failure case” in collective opportunity development in the entrepreneurship domain, making it an important complement to international entrepreneurship studies which have tended to focus almost solely on entrepreneurial successes and avoided discussing failures (Nummela et al., 2016). The first part of the book concludes with the chapter by Luke Treves, who assesses another contemporary issue that international business and entrepreneurship scholars have tended to overlook: the role of

internet of things (IoT) in business model innovation in the digital age we are living in today. Discussion on digital transformation as a larger societal phenomenon leads into outlining the main implications of business model innovation for IoT-related entrepreneurship in general.

The second part of the book illustrates some of the main macro-level issues in international business and entrepreneurship today. The chapter by Arti Yadav and Badar Alam Iqbal describes the role of FDI in today's era of increasing digital and environmental sustainability. As they point out, the impact of FDI on the environment can be both positive and negative, it has a vital role in progress towards digitalization-based economy and in ensuring that global trade is based on both economic and sustainable goals. The second chapter in this part, by Hamza El Guili, Lasse Torkkeli and Anisur R. Faroque, develops a framework for understanding how SMEs trying to manage their exports during a global crisis should approach export promotion. Practical and policy recommendations arising from this framework underline the importance of setting up and updating modern communication channels to ensure effective interaction between those institutions and organizations providing export support, and those firms receiving it. This part of the book is concluded by the study of Igor Laine and Lasse Torkkeli, who take on a sector of industry whose rise is increasingly important in 21st century international business and entrepreneurship: the cleantech sector. The study applies the perspective of organizational ecology to explain how cleantech industry in a country perspective, here Finland, emerges, develops and internationalizes.

The third and final part of the book closes in from the macro-level to focus on the microfoundations of international business and entrepreneurship. The role of the individual has often been neglected in traditional international business research - which has tended to focus on the firm-level, that is on multinational enterprises – and in international entrepreneurship, where the focus has often similarly been on the firm-level, especially on rapidly internationalizing international new ventures (McDougall & Oviatt, 1994) and born globals (Rennie, 1993; Knight & Cavusgil, 2004). However, the beginning of the 21st century has since seen the development of the “gig economy” platforms such as Uber and Wolt, rise of individualism and the value of intrapreneurial behavior in international business (e.g., Halme et al., 2012), as well as the emergence of a new generation of millennial entrepreneurs (Liu et al., 2019). Therefore, shedding light on the individual entrepreneurs and employees in multinational enterprises is both important and timely. To this effect, the chapter by Agnes Asemokha and Satu Vesin describes how entrepreneurs make sense of and change their business models

as they perceive international opportunities. Business model change in general has received less attention in international entrepreneurship research, considering the fact that the business model is argued to determine entrepreneurial internationalization (Hennart, 2014) to begin with. The chapter by Jie Chen illustrates the role of the individual in an important research topic in international business, Chinese state-owned enterprises. They have a major role in the global economy and investment landscape, yet there has been very little research on how Chinese state-owned enterprises are managed internally. The chapter sheds light on that, while clarifying how relationships between the Chinese expatriate managers in foreign subsidiaries and the local assembly line workers function. In doing so, the study provides a view into the individual in the Chinese multinational context. Last but not least, the chapter by Maria Ivanova-Gongne and Olga Dziubaniuk highlights a topic that will be one of the key global developments in international business and entrepreneurship in the 21st century: immigrant entrepreneurship. The study explains the role that bicultural identity of migrant entrepreneurs has when they try to develop their enterprises in their new home country. Applying the sensemaking perspective, the chapter describes dynamics of culture frame switching in international entrepreneurship and its role in contemporary international business and entrepreneurship.

With these words, we welcome you the reader to join us on this journey to the world of contemporary international business and entrepreneurship here in the 21st century.

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PART 1:

DIGITAL INTERNATIONAL BUSINESS AND ENTREPRENEURSHIP

THE IMPACT OF FUTURE TECHNOLOGIES ON INTERNATIONAL BUSINESS

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1. Introduction

There has been more interest in technology in international business research. Discussion around the Fourth Industrial Revolution predicts that advances in technologies, such as sensors, robots, additive manufacturing, augmented reality, and artificial intelligence, impact offshoring and backshoring decisions, making local value chains more competitive and challenging the hegemony of global value chains (Dachs et al. 2019; Mees-Buss et al. 2019; Sinkovics & Sinkovics 2020). Liu et al. (2019) suggest that business ventures building on the Internet of Things, blockchain, and artificial intelligence are drastically changing the world. However, little is known about the impact of future technologies on international business practices. Fortunately, Monaghan et al. (2020, p. 20) call for interdisciplinary insights, asking, “how will advances in technology and computer science, i.e. artificial intelligence, blockchain technology, and augmented reality, change international business?” It is important to answer this question as this insight has not only business implications but can also help us define the future’s strategic industries that will carry both economic and geopolitical importance. For instance, Petricevic and Teece (2019) suggest that artificial intelligence, advanced manufacturing, quantum information science, and 5G may become strategic industries in the future.

The purpose of this book chapter is to envision the impact of future technologies on international business. The study reveals the most impactful technologies and their associated changes to international business practice. The empirical data build on a Delphi study that was conducted in summer 2020. The expert panels consisted of both scholars and practitioners of international business and entrepreneurship.

In the following chapter, I describe the research method in detail. Next, I present the findings of the Delphi study. I also briefly discuss the current

state-of-the-art in international business research around the technologies. As a result, I am able to highlight the novel findings of the study and suggest how they contribute to international business literature.

2. Methods

To answer the research question, I employed a structured Delphi study (Dalkey & Helmer, 1963) to gain insight from a diverse group of experts. As it is difficult to know in advance what technologies may be considered to have the most impact on international business practices, the Delphi method allows wider discussion than quantitative studies (Winkler et al., 2015), and it is especially suitable for studying rapid environmental changes (Hayes, 2007). The Delphi method enables the experts to contribute ideas, provide feedback, revise initial assumptions, and assess the findings collectively but anonymously (Mitroff & Turoff, 1975).

In addition, multiple rounds of data collection and feedback enable the experts to revise their initial assumptions and opinions and contribute to group consensus in an interactive way (Dalkey & Helmer, 1963). The insight developed throughout the study gives the individuals an opportunity to modify their judgments against the collective views of the panel (Mitroff & Turoff, 1975). Therefore, it is important to keep the same informants throughout the study.

The Delphi process started with expert selection. I felt it was important to include both international business practitioners and scholars in the expert panel. I invited people from different continents.

Experts from both subpanels (the 5G network and the healthcare market) were formally invited to participate in the study by e-mail in May 2020. As Delphi does not seek to establish explanatory power from statistical variance, the number of respondents is usually small, with approximately 10–18 experts in a group (Okoli & Pawlowski, 2004). I aimed to receive a commitment from around 15 experts. I knew that not everyone would be able to commit to a relatively long research process over the summer. Therefore, I aimed for a 50% response rate and invited 15 international business scholars and 15 international business practitioners to the panel.

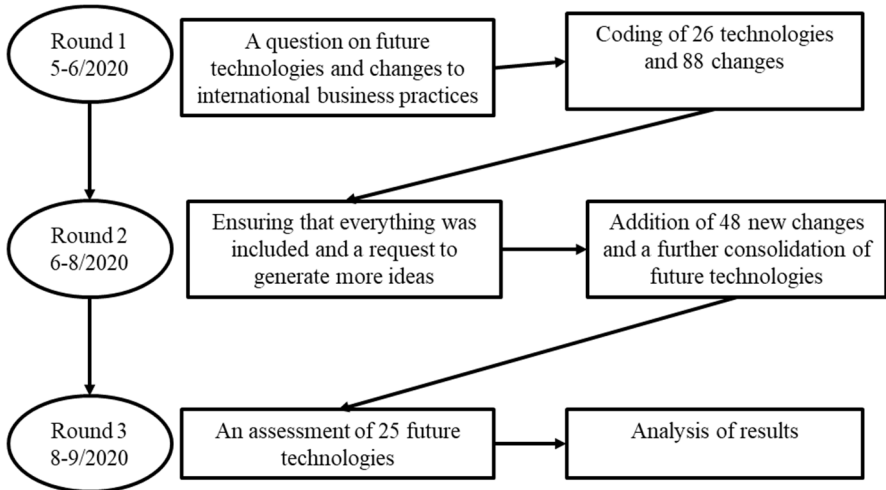
The final panel comprised 16 experts (response rate 53.3%): 8 international business scholars and 8 international business practitioners. Both male and female experts (7 men and 9 women) were included. All respondents represented different organizations and held different positions (e.g., CEO,

professor, international business director). Each participant also remained active and provided their insight throughout the process.

3. Data collection and analysis

I collected and analyzed the data in four rounds (see Figure 1) from May 2020 to September 2020.

Figure 1 Data collection and analysis



In Round 1, I gave the experts two tasks: “Name 5 technologies that are going to change international business in 5–10 years,” and “Envision the changes in international business that each of these technologies is triggering. Please link your answer to the 5 technologies above.” I summarized Round 1 answers around technologies. As part of that process, I needed to combine some technologies and changes to make the findings more accessible to the panel. Altogether, there were 26 technologies and 1–20 envisioned changes in international businesses linked with each technology.

In Round 2, I gave the experts an opportunity to review what the other experts came up with in the previous round. I presented a summary of the first-round results so the experts were able to ensure that their insight was accounted for and to generate new ideas for technologies or changes that were not present. The experts suggested 48 changes and additions to the

original list of important technologies and the changes that the technologies were envisioned to trigger. Based on these responses, I revised the list and consolidated some technologies and changes further. As a result, the final list covered 25 technologies and related changes to international business practices.

In Round 3, I asked the experts to highlight the top 10 technologies that will have the biggest impact on international business practices in 5–10 years. As a result, I was able to identify technologies that most (50% or more) of the experts considered to be among the most impactful. Moreover, I was able to compare the results of each subpanel: scholars and practitioners.

4. Experts' view on the most impactful future technologies and the envisioned changes on international business practices:

I was able to identify 10 technologies that international business scholars and practitioners perceive as creating the biggest impact on international business practices in the next 5–10 years. Of note, the changes to international business were not ranked in terms of importance; the envisioned changes may be very subjective, and therefore, readers of this chapter can browse through the list and consider which changes they find most meaningful. Interestingly, all experts listed artificial intelligence among the top 10 technologies. It also gained the most envisioned changes during the first two rounds of the Delphi process. Other impactful technologies are 5G, blockchain, communication-related technologies, digital platform and online sales technology, fintech (incl. cryptocurrencies), food technology (incl. synthetic food and vertical farming), renewable energy technology (incl. Battery technology and electric vehicles), augmented reality, and robotics. A detailed list of the envisioned changes to international business practices is available as an appendix. Here, in the following, I describe the main changes from my subjective view.

Artificial intelligence is expected to change international business practices by improving analytics, resulting in more accurate and optimized production and delivery and overall efficiency of international trade. Importantly, it is possible to have a better understanding of local taste, habits, and trends by analyzing data. Many technology companies are already doing this, and a wider spread of AI technology may make this more common.

Communication-related technologies are expected to make international communication faster and more efficient than before. This is interesting because, while there have been media for cross-border communications for a long time, technology is expected to further decrease the need for the movement of people. While this may make communication faster and more efficient and could positively impact processes within and across organizations, it may also have unintended negative consequences. The experts are concerned about a lack of target market understanding when managers learn about the foreign market remotely.

Digital platform and online sales technology carry a similar impact to communication-related technologies in that they reduce the need for international travel. There is less need for facilities, and fewer people need to relocate. The experts view this development fairly positively, as it provides new opportunities for companies around the world. It also changes how people and companies buy goods and services. In other words, the country of origin partly loses its importance. Yet, one might consider the lack of localization as a negative aspect when standardized products are distributed around the globe.

All other digital, internet-based technologies and services will be mediated, in part, by the impact of 5G technology. It will partly support the spread of AI- and IoT-based solutions. The experts expect that it will enable a more stable and efficient infrastructure for international trade and communication. Yet, there are also concerns about security, as companies and services become more and more reliant on the internet.

Blockchain technology and fintech (incl. cryptocurrencies) are expected to disrupt industries. Important changes are expected in international business in logistics when the movement of goods can be traced better and more reliably. This improves security and lowers costs in many areas of business. Through the introduction of cryptocurrencies, the transfer of large sums of money around the world is faster and more affordable than ever before. While blockchain technology enables more effective collaboration and increases the security and transparency of business transactions, there are also concerns around geopolitics. Cryptocurrencies, in particular, are expected to cause economic deviation and instability.

The experts also envisioned important changes through food technology, as it makes food production less bound to the land. Synthetic food and vertical farming can bring food production closer to where people live and consume the food products, which brings new global opportunities for food

production and increases food security. By fighting against hunger, food technology can have a wider societal impact and a bigger indirect influence on international business.

In line with food technology, renewable energy technology enables the development of more sustainable products for international markets. It also makes international travel more sustainable. The experts are aware that a more drastic change from fossil fuels to renewable energy may cause political tensions and may thus have an indirect impact on international business practices.

Augmented reality introduces new opportunities for virtual meetings, sales, maintenance, and customer service. It is expected to improve the productivity of humans and increase the perceived value of customers. It may also bring new opportunities to provide localized service across borders. But, as mentioned above regarding new communication technologies, augmented reality may reduce the personal understanding of a market if managers rely too much on augmented reality.

Last, experts envisioned that robotics brings production from low-cost markets closer to the home country. Robots help with increased automation in customer service, data automation, and operations. As robots are expected to replace humans, experts envision that the increased use of robots will reduce the number of employees in emerging markets. This may create some conflict, while also shifting people from dangerous jobs to a safer work environment.

While the two expert panels (scholars and practitioners) mostly listed the same future technologies as being the most impactful, five technologies were voted into the top 10 by a majority of either a panel of scholars or a panel of practitioners, but not both.

A majority of international business scholars voted global reliable internet (4/8 votes) as being among the most impactful future technologies, as it drives massive adoption in underserved communities, opens new markets, provides educational international resources to remote and previously digitally excluded communities, and democratizes all aspects of international business and the ability of all nations to participate in buying and selling.

Unlike international business scholars, a majority of practitioners voted Cybersecurity technology (5/8 votes), Autonomous driving / Autonomous logistics (incl. Drone technology) (4/8 votes), IoT (incl. Telematics) (4/8 votes), and Quantum computing (4/8 votes) as being among the top 10 most

impactful future technologies. Cybersecurity technology is envisioned to provide safe internet-based businesses and to create sophisticated internet-based jobs. Autonomous driving / Autonomous logistics was considered to make logistics more efficient and reliable, reduce labor costs and take away jobs in logistics, increase labor costs in programming and correcting algorithms, decrease or increase accidents, and enable faster delivery of goods. Thus, the experts suggested both positive and negative impacts on various business actors. IoT is envisioned to change international business using humans to using nonhuman personnel, increase global efficiency of logistics and supply chain management, and facilitate offerings in a new way on a global level. Quantum computing was similarly seen as important for international business practices as it dramatically influences the use of other technologies, making them either obsolete or better.

5. Discussion

This study highlights the impact of future technologies on international business in a way that is unique to the literature. While there have been some suggestions on how future technologies, in general, might impact international business, this is the first study that takes a closer look at what the most impactful future technologies are and reveals the potential changes to international business practices. In the following, I show what has been discussed around the most impactful technologies in the prior literature. This helps to link the findings to the ongoing scholarly debate in international business and highlights the contribution of this study vis-à-vis leading IB technology articles.

5G. It is interesting that there are no studies that focus on the impact of 5G on international business. For instance, the study by Kaartemo and Nyström (2021) is limited to overall market changes. The lack of interest in 5G in international business literature is surprising given that 5G enables more stable, high-speed, and efficient digital infrastructure for international trade solutions. It acts as a platform for other technological solutions, such as artificial intelligence and the Internet of Things, which may, in turn, have a great impact on international business. AI, for instance, is expected to enable better and more optimized service across borders. For time-reliant activities, it is important that operations are supported by fast and stable internet connections, which 5G enables. While it can have a great positive impact by democratizing international communication, there is also a threat that 5G triggers international political debate and disruption regarding security concerns. As a result, the emergence of 5G may make countries

more inward-looking, in part changing the tradition of free trade development that many international companies depend on.

Artificial intelligence. Except for a recent study by Deng et al. (2020) on the potential impact of artificial intelligence on shopping channel choices, the technology has remained as a side note in various technology-related studies. Hence, the envisioned changes to international business practices remain unheard of in leading international business journals. While individual scholars have mentioned the technology, there is no thorough empirical research on the implications of artificial intelligence for any aspects of international business. This is shocking, given that there are already plenty of different real-world applications utilizing artificial intelligence. One might even question labeling it as “a future technology.” Nevertheless, artificial intelligence is expected to grow in importance, and the experts unanimously agree that AI will have an impact on international business practices within 5–10 years.

Blockchain. Nambisan et al. (2019) note that “blockchain technology can enhance the extent of information shared and processed by foreign partners.” Otherwise, the impact of blockchain technology on international business practices remains implicit. Although I included cryptocurrencies among fintech in this study, even cryptocurrencies as a special application of blockchain technology are not discussed in international business literature.

Communication-related technologies. This is the most abstract technology among the future technologies. In principle, communications technologies have attracted attention from IB scholars since the turn of the millennium (Rao 2001; Santangelo 2001). But this does not mean that we only discuss past technologies. As I collected the empirical data during the COVID-19 pandemic, it is no wonder that the experts started to consider how the need for moving people and the biological risk of human physical interactions will decrease in the future. Interestingly, the experts also raised a dark side of this development: managers may start losing their personal understandings of the market when they operate overseas remotely.

Digital platform and online sales technology. Digital platforms have gained more interest from international business scholars than most other future technologies combined. As noted by Ojala et al. (2018), digital platforms enable companies to serve multi-sided markets and rapidly scale globally. This raises questions about some of the basic assumptions in the traditional Uppsala model and its more revised versions (Chen et al. 2019). Jean et al.

(2020) discuss the antecedents and outcomes of digital platform risk for international new ventures' internationalization. Their findings reveal that digital platform risk tends to reduce the internationalization scope of international new ventures. Altogether, these studies question some earlier theories and models and extend them, as digital platforms and online sales technologies enable startups to internationalize in a way that was previously impossible. This interest in digital platforms has even led to the development of the framework of digital platform internationalization (Li et al. 2019).

Fintech (incl. Cryptocurrencies). In this study, cryptocurrencies were considered a part of fintech, while they could be also seen as a part of blockchain technology (also among the most impactful technologies). In general, the impact of cryptocurrencies on international business practices remains unknown, although they provide new opportunities for borderless trade and frictionless movement of capital. Top international business journals lack mentions of bitcoin or any altcoins. As an exception, Ajouz et al. (2020) studied the acceptance of Sharī'ah-compliant precious metal-backed cryptocurrency as an alternative currency. Fintech is also relatively untouched territory; there is no discussion on how it can provide emerging economy customers better access to international goods or how it may cause economic deviation and instability. While Hammerschlag et al. (2020) interviewed 14 African fintech firms to understand their intra-African expansion, fintech is mostly just an industry context for these companies. As a result, there is basically no study that would discuss the impact of fintech on international business practices.

Food technology (incl. synthetic food and vertical farming). Given that food technology introduces a potential for revolutionizing one of the biggest industries in the world, it is surprising that it remains a novel era for international business research. It provides interesting insight for bringing food production back home and may represent interesting network effects from global value chains to the role of international new ventures in the traditional market.

Renewable energy technology (incl. Battery technology and electric vehicles). Recently, Kaartemo and Gonzalez-Perez (2020) noted that renewable energy is relatively rarely studied in international business. This is unfortunate, given that the development and adoption of renewable energy relates to the most important social and environmental challenges on a global scale. While a recent special issue on critical perspectives on international business featured a handful of articles laying the groundwork

for the theme (Alarcón 2020; Asemokha et al. 2020; Frutos-Bencze et al. 2020; Rialp-Crialdo et al. 2020), there is still a need for further studies linking renewable energy with international business.

Augmented reality. As noted by Sinkovics and Sinkovics (2020), international business studies on augmented reality remain wide open for substantive research. It is surprising that there has not been any interest in the impact of augmented reality on international business. After all, it provides new opportunities for communications and generally drives several changes there, such as diminishing the need for traveling. Importantly, it can change sensitive experiences and may thus be important for changing international tourism, which is one of the biggest industries in the world.

Robotics. As part of the discussion on megatrends that are changing the business ecosystem, Esposito and Tse (2018) noted the importance of robotics in raising new opportunities just like the Internet revolution in the past. Yet, the impact of robotics on international business practices remains understudied. Sinkovics and Sinkovics (2020) propose that robotics along with additive manufacturing can provide promising, lively, and impactful research avenues for international marketing.

6. Concluding remarks

This study reveals the most impactful future technologies from the perspective of international business. As a result, the findings enable researchers to focus on technologies that are going to have the biggest impact. Moreover, the study illuminates the changes that experts associate with these technologies. Hence, international business scholars may use envisioned changes as a starting point for future studies. Interestingly, the study hints that practitioners perceive some technologies to be more impactful on international business than researchers do. This can provide insight to guide research efforts around these technologies and around changes that might otherwise remain overlooked. In addition to some positive changes that the technologies may bring to international business, there is also the potential for negative consequences, or the “dark side” of future technologies.

Building on Delphi methodology, this paper provides a method for international business and entrepreneurship scholars to identify the most impactful technologies. It is encouraged that similar studies be conducted in different geographic regions, with different time horizons, specifically focusing on certain industries to get more detailed insight.

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Appendix 1

Top 10 technologies that are going to have the biggest impact on international business practices in 5–10 years

1) Artificial intelligence (16/16)

- improves customer experience across countries and cultures
- enables digital food labeling
- enables the more accurate reaction to local demands
- enables the more accurate and efficient production and delivery of products and services
- changes international business from humans to nonhumans, which alters the nature of business network relationships and thus conflict, negotiation, trust, etc
- increases efficiency of global trade
- enables a better development and identification of international opportunities
- enables new business models
- improves the personalization of products and services
- enables a better understanding of customer preferences, including latent/non-expressed preferences
- enables a better understanding of market trends
- enables a better understanding of technological change
- enables a better understanding of population shifts
- disrupts social interaction
- optimizes routes for both local and international logistics
- improves relationships with the customer in digital channels
- improves the competitiveness of Western factories against the Asian factories
- enables more cost-effective, secure, and fast production
- enhances market intelligence and data-backed strategic decision-making
- makes services and products based on AI the norm
- automates boring jobs humans used to do and puts people out of work
- posits challenges to developing and underdeveloped countries that won't be financially able to catch up with the technological upgrade
- decreases cultural and institutional knowledge for managers regarding international markets (no live personal experience)
- helps identify fake information or messaging

2) Communication-related technologies (11/16)

- makes participation from diverse corners faster and more efficient
- changes organizational forms, processes, and operations
- decreases the need for movement of people
- provides incentives for developing more human intuitive communication software and hardware
- reduces the biological risk of human physical interactions
- reduces the international managers' live, personal understanding of a market

3) Digital platform and online sales technology (11/16)

- reduces the need for facilities, production, and employees located around the world
- allows individuals and small businesses to find one another and trade goods or services
- creates centralized consumers goods and services markets
- reduces the biological risk of human physical interactions
- changes buying patterns
- enables borderless buying options
- improves the ability of local firms to serve global markets
- provides a way for non-digital firms to learn how to digitalize aspects of their business.
- democratizes innovation and entrepreneurship around the world

4) 5G (9/16)

- enables more stable, high speed and efficient digital infrastructure for international trade solutions
- enables AI- and IoT-based solutions
- activates trade of more sophisticated internet-based services
- triggers international political debate and disruption regarding security concerns.
- democratizes international communication

5) Blockchain (9/16)

- disrupts rules in certain industries
- brings up geopolitical issues
- enables more effective collaboration
- enables new business models
- facilitates all information and financial flows for all aspects of international trade

- increases the transparency of business transactions
- improves the tracking of movement of goods and tracing them to suppliers in different countries
- changes global distribution and global trade
- improves the security of supply chains
- lowers financing cost for all supply chain parties
- increases carbon footprint for business and users
- increases incentives for higher-skilled hackers
- reduces the need for personally attending notary services

6) Fintech (incl. Cryptocurrencies) (9/16)

- causes economic deviation and instability
- reduces the cost of international trade and remittance
- improves the ability of emerging economy customers to pay for international goods
- enables the transfer of large sums of money from anywhere to anywhere in the world

7) Food technology (incl. synthetic food and vertical farming) (9/16)

- makes food production unbound to the land
- enables global sales possibilities for food
- increases food security and it could support the fight against hunger

8) Renewable energy technology (incl. Battery technology and electric vehicles) (9/16)

- makes the global delivery of products more sustainable
- makes traveling more sustainable
- provides market incentives for sustainable mining and circular economy
- disrupts reliance on traditional energy supplies thus creating political tension

9) Augmented reality (8/16)

- introduces new possibilities for distanced virtual meetings
- introduces new opportunities for visualizing solutions pre-purchase
- introduces new opportunities for maintenance/repair
- allows humans to possess computer-like abilities
- allows computers to possess human-like abilities and in terms of IB, adapt easily across cultures in terms of cultural and institutional knowledge, speaking the appropriate language, etc.

- improves the productivity of the human labor force
- increases the value of perceived sensitive experience
- reduces the international managers' live, personal understanding of a market

10)Robotics (8/16)

- brings production from low-cost economies back to the home country
- reduces jobs in emerging markets
- displaces humans in various operations
- increases automation with customer service, data automation & operational speed
- provides alternatives to dangerous jobs previously performing by humans (mining, health care of highly contagious diseases)