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# Managing uncertainty during a global pandemic: An international business perspective

Piyush Sharma<sup>a,\*</sup>, T.Y. Leung<sup>b</sup>, Russel P.J. Kingshott<sup>c</sup>, Nebojsa S. Davcik<sup>d</sup>, Silvio Cardinali<sup>e</sup>

<sup>a</sup> School of Marketing, Curtin University, Bentley, WA 6102, Australia

<sup>b</sup> Lee Shau Kee School of Business & Administration, The Open University of Hong Kong

<sup>c</sup> School of Marketing, Curtin University, Bentley, WA 6102, Australia

<sup>d</sup> EM Normandie Business School, Méris Lab, Oxford, UK

<sup>e</sup> Faculty of Economics "Giorgio Fuà", Università Politecnica delle Marche, Ancona, Italy

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## ABSTRACT

Despite the perennial need to understand and manage uncertainty in international business, there is no comprehensive framework that incorporates different types of uncertainty, their antecedents and outcomes, and the different coping strategies used by managers and their outcomes. This makes it difficult for international business managers to understand the types of uncertainty in their businesses and develop appropriate strategies to deal with it effectively, especially during times such as the ongoing Covid-19 pandemic. This paper uses an extensive review of the international business literature to address the above research gap by identifying the different types of uncertainty, their antecedents and outcomes, the coping strategies used to mitigate their impact, and the consequences of these actions. The authors also use examples from the current Covid-19 crisis to assess the firms' responses and their consequences. The paper concludes with some implications for international business managers and directions for future research.

## 1. Introduction

Globalization, the process by which national economies have integrated into a vast inter-connected global economic system, has led to a tremendous growth in global trade and international business. As a result, global trade and GDP have grown in tandem recently, both increasing by 26 per cent during 2008–18 period (WTO, 2019). Specifically, global trade was estimated at about \$25.3 trillion in 2018, comprising \$19.67 trillion (78%) from merchandise trade and \$5.63 trillion (22%) from commercial services (WTO, 2019), while nominal global GDP was estimated at \$84 trillion in 2018, \$88 trillion in 2019 and was projected to slow down to about \$90 trillion in 2020 (World Bank, 2019). As the China economy expanded faster than other manufacturing economies and the US economy grew at a healthy rate as 2019 drew to a close, the only major worry for the global economy seem to be the possibility of an escalation in the trade tensions between these two giants (WTO, 2019).

However, in late 2019, a new Coronavirus was discovered in Wuhan, the capital of Hubei province in Central China, a typical sprawling city and a thriving hub of commercial and industrial activity,

with a population of 11.08 million (Torsello & Winkler, 2020). For the next few months, the rest of the world watched in awe as the Chinese government put all its power in trying to stop this new virus (SARS-CoV-2) and the resulting disease, named by WHO as Covid-19, including a total lockdown of the Hubei province and strict control of domestic and international travel (Barua, 2020). Fast forward to April 2020: Global trade is now expected to fall by between 13% and 32% in 2020 as the Covid-19 pandemic rampages across the world, leaving a trail of death and destruction in its wake, almost paralyzing normal economic activity and social life in every country (WTO, 2019).

With more than 4.33 million people already infected and more than 290,000 dead, at the time of writing this article (Worldometers, 2020), Covid-19 has been the deadliest virus in recent history to hit the world community (Barua, 2020). In response, scientists around the world are in a race against time to develop a vaccine and find the right drugs to treat the debilitating symptoms of this unique disease as it continues to wreak havoc on the global economy. Most countries have issued stay-in-shelter orders to their citizens, locked down their borders to inbound and outbound travel, and restricted the flow of everything except essential commodities such as food and medicine (Evans, 2020). This has

\* Corresponding author.

E-mail addresses: [Piyush.Sharma@curtin.edu.au](mailto:Piyush.Sharma@curtin.edu.au) (P. Sharma), [tyleung@ouhk.edu.hk](mailto:tyleung@ouhk.edu.hk) (T.Y. Leung), [r.kingshott@curtin.edu.au](mailto:r.kingshott@curtin.edu.au) (R.P.J. Kingshott), [davcik@live.com](mailto:davcik@live.com) (N.S. Davcik), [s.cardinali@univpm.it](mailto:s.cardinali@univpm.it) (S. Cardinali).

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had a dramatic impact on many economies and global trade to a point of near ‘de-globalization’, with almost all global business activities either temporarily shut down or significantly slowed, including global supply chains, international passenger and cargo traffic, manufacturing and commercial services, hospitality, tourism and education (Barua, 2020).

As most small (face-to-face contact) businesses such as cafes, restaurants, and hair salons shut down and millions of people (particularly migrant and part-time workers) lose their jobs around the world, governments are being forced to give them cash to help them ride through this unprecedented crisis (e.g. Australian Treasury, 2020; Canada Government (2020), 2020; UK Government (2020), 2020). However, such stimuli and handouts are ultimately going to put a tremendous financial burden on all countries for the next few years, which may be further compounded by catastrophic economic events directly caused by Covid-19, such as Virgin Australia, a major airlines declaring insolvency (BBC, 2020) and WTI crude oil futures expiring in May plunging 321% to -\$40.32 a barrel (Sardana, 2020). Under such a gloomy environment filled with so much uncertainty, besides dealing with the issue on hand, we also need to learn from this experience how to avoid or manage such a dire situation in future.

International business has always been associated with some degree of risk and uncertainty as it requires erstwhile domestic firms to get out of their comfort zones in order to seek greener pastures in overseas markets (Mascarenhas, 1982). Hence, it is not surprising to see a vast body of literature exploring the nature of risk and uncertainty, their impact on international business performance and underlying strategies used by firms to identify, forecast, mitigate and manage these in their everyday operations (Sniazhko, 2019). However, there is still confusion between risk and uncertainty with many using these terms interchangeably. For example, risk is generally defined as an uncertain event or condition associated with doing business in foreign markets that can have a negative effect on the firm (Miller, 1992), while uncertainty is defined as the lack of knowledge about the probabilities of the future state of events that may influence the firm (Knight, 1921). Firms involved in international business have to manage different types of risks, such as political, country, foreign exchange, and cultural threats (Eduardsen & Marinova, 2020). Similarly, uncertainty affects firms’ choice of path and entry mode for internationalization, speed of international expansion, and commitment to internationalization (Magnani & Zucchella, 2019).

A key difference between risk and uncertainty is that most risks can be anticipated and measured with varying degrees of probability, whereas uncertainty is a subjective, multi-dimensional concept that varies based on its source and the degree to which it is experienced - hence is very difficult to measure (Alpers, 2019). The current Covid-19 case is a great example of how this distinction plays out in reality. For example, most international business managers are able to estimate the perceived financial or operational risk to their businesses, but they may struggle to understand and deal with the uncertainty about its broader impact on the future of their business and society or even economy as a whole. While the inability of international business managers to fully appreciate and eliminate uncertainty in normal times could have a negative impact on their decision-making, this is likely to be further exacerbated when faced with an unexpected crisis like Covid-19. Hence, it is vital for the international business managers to learn how to manage uncertainty in order to guide their firms through such unpredictable and undesirable situations (Alpers, 2019). It is even more critical to do so when such events occur rapidly across the globe.

Despite the perennial need to understand and manage uncertainty in international business, there is no comprehensive framework that incorporates different types of uncertainty, their antecedents and outcomes, and the different coping strategies used by managers and their outcomes. This makes it difficult for international business managers to understand the types of uncertainty in their businesses and develop appropriate strategies to deal with it effectively, especially during time

such as the ongoing Covid-19 pandemic. This paper uses an extensive review of the international business literature to address the above research gap by identifying the different types of uncertainty, their antecedents and outcomes, the coping strategies used to mitigate their impact, and the consequences of these actions. The authors also use examples from the current Covid-19 crisis, to assess the firms’ responses and their consequences. The paper concludes with some implications for international business managers and directions for future research.

## 2. Theoretical background and conceptual framework

### 2.1. Uncertainty – Definition and dimensions

Past research identifies different types of uncertainty based on its source (environmental, industry or firm characteristics) or its nature (exogenous vs. endogenous) in the international business context (Certo, Connelly, & Tihanyi, 2008). However, there is still no consensus on the distinction among different dimensions of uncertainty and as a result, these are often used inconsistently or interchangeably, which in turn may hamper the decision-making by international business managers facing uncertainty, by providing an incomplete picture of the role played by uncertainty in international business context (Sniazhko, 2019). A lack of clear distinction among different dimensions of uncertainty may also lead to risky decisions due to misplaced perceptions about the prevailing environment (Brouters, 1995).

A consensus on the exact definition of uncertainty remains elusive, with arguments revolving around whether it is an objective description of an firm’s environment (Milliken, 1987) or the subjective perception of an individual manager or decision-maker about the uncertainty in the environment (Michel, 2007; Milliken, 1987). While the former suggests a universal view of uncertainty, the latter implies uncertainty lies “in the eye of the beholder” (Milliken, 1987; p. 134). To add to the confusion, researchers describe uncertainty in terms of ambiguity, complexity, conflict, entropy, equivocality, risk, and turbulence (Alpers, 2019). Milliken (1987; p. 136) defines uncertainty as a “perceived inability to predict something accurately” resulting from a lack of confidence in one’s knowledge in a situation. From that perspective, uncertainty can be considered to be an overarching environmental variable that influences a business or the economy as a whole, rather than a level of ambiguity, complexity or risk involved in a single problem or decision-making context (Alpers, 2019). This depiction of uncertainty as an overarching environmental variable is particularly relevant to the current crisis as uncertainty due to its widespread and almost instantaneous impact across different countries and markets has made it difficult to predict and control by any single business as it has affected entire international business ecosystems within and across nations.

Past research also identifies several dimensions of uncertainty, namely *environmental uncertainty* that includes political, economic, government, cultural and discontinuous uncertainty, and represents both formal and informal parts of a country’s environment (Sniazhko, 2019). As is evident by the rapid global spread of Covid-19, the nature and level of uncertainty is potentially amplified due to the potential disconnect that each of these elements may have across different national boundaries. Similarly, *industry uncertainty* includes input, demand, competition and technological uncertainty, whereas *firm uncertainty* relates to behavioral, R&D, operating and previous experience uncertainty. The cross-national differences in these two types of uncertainties, coupled with the inconsistencies in the way uncertainty is conceptualized and operationalized (Sniazhko, 2019), fail to provide a complete picture of the impact of uncertainty on international business performance.

At first glance, discontinuous uncertainty may seem to best describe the uncertainty associated with the Covid-19 pandemic, because its impact is quite similar to that of a natural disaster that result in widespread human and economic casualties (Oetzel & Oh, 2014). However,

viewing it through this single lens may be problematic because of its cascading effect on other types of uncertainty, such as environmental, political, industry, and firm uncertainties, as highlighted by the way most countries across the world did not consider Covid-19 to be a serious threat when it was mainly concentrated in China and neighboring countries. In fact, they seemed to be only concerned about the continuity of supply chains to ensure the availability of manufactured goods from China, while they waited for further instructions from WHO about the impending disaster, which may have resulted in a great deal of political uncertainty (Gray, 2020). However, as the virus spread across the globe, its impact on the governments, public institutions, industries and individual firms became more apparent, with most nations coming to a stand-still due to the lock-downs and closing of borders, which led to industry and firm level uncertainty. Hence, one major learning from this experience for international business managers and policy-makers is to consider all the dimensions of uncertainty simultaneously or in sequence, to ensure a more unified approach to dealing with such global disasters in future.

## 2.2. Uncertainty assessment

Previous studies also examine how contextual (e.g. firm, industry, and national) factors influence managerial perceptions of uncertainty (Bouquet, Morrison, & Birkinshaw, 2009; Santos-Álvarez & García-Merino, 2010). For example, larger and older firms tend to have more resources that may help reduce the perceived risk due to an uncertain environment (Acedo & Jones, 2007; Liesch, Welch, & Buckley, 2011), while family firms perceive greater risk than non-family firms (Claver, Rienda, & Quer, 2008). Others show systematic variation in risk perceptions across nations due to differences in their formal and informal institutional structures (Makhija & Stewart, 2002), which affect the nature and availability of information for decision-makers and the consequences of their decisions (Delerue & Simon, 2009).

The Covid-19 crisis provides mixed evidence to these ideas as we can see even larger and older businesses like airlines and retailers coming under tremendous pressure and being forced to furlough or lay-off a large number of employees, just as smaller businesses like cafes and restaurants. Similarly, developed nations in Europe and North America lead the number of diagnosed cases and deaths due to Covid-19, which suggests either a complete failure of their public health systems (e.g., in Italy and Spain) or a lack of political leadership (e.g., in UK and USA). By contrast, countries like South Korea, Australia, and New Zealand have managed to flatten the infection curve with minimal disruption, due to a combination of excellent public health systems and responsible political leadership, while Singapore has seen a second wave of cases despite its early success (Ang, 2020). Interestingly, China seems to have almost controlled further spread of Covid-19, while India has so far managed to keep the number of cases and death quite low relative to its huge population (Srivastav, 2020). However, it is still early to see how countries in the rest of Asia, Africa and Latin America handle this ongoing crisis.

## 2.3. Uncertainty – Antecedents and outcomes

Current literature focuses on the factors that influence the choice of a particular approach to manage uncertainty (e.g., the role of decision-makers) but pays less attention to the antecedents and outcomes of the different types of uncertainty and/or the outcomes of international business firms strategies used to manage uncertainty. As a result, there is a limited understanding of the impact of uncertainty in the international business environment, and in particular, how it may influence the performance of different businesses based on their unique conditions. For example, one of the main challenges in international business is the assessment of the impact of uncertainty when the risks are interconnected and asymmetric (Bekaert, Harvey, Lundblad, and Siegel, 2014; Buckley, Chen, Clegg, & Voss, 2016), including macro risks that

affect most firms and micro risks that only impact a few firms – contingent upon their origin (Eduardsen & Marinova, 2020). Most small firms do not even attempt to assess some types of uncertainty (e.g., political and economic) as these may not affect them directly and/or due to the unstructured and subjective nature of their assessment methods (Oetzel, 2005). Moreover, they may rely on the managers' own judgment and expert opinion that could be biased and subjective (Eduardsen & Marinova, 2020), as exhibited by the inability of the governments in many countries to anticipate and control the spread of Covid-19 despite having proper pandemic plans in place for many years. For example, public health managers and political leaders have launched programs and initiatives after every major health crisis in the US in the last two decades but most of these “programs were defunded, staff was allowed to depart and Washington forgot the stark lessons it had just learned” (Diamond, 2020).

The Covid-19 crisis further demonstrates these issues in quite a dramatic manner, wherein many small businesses around the world have simply collapsed due to the lack of demand from their regular customers and an inability to pivot to alternate ways of doing business. Of course, there are exceptions, such as restaurants switching over to a take-away model instead of dine-in option, fast food franchisees selling bread and milk through their drive-thru counters, and rideshare operators such as Ola and Uber taking up mail and package delivery as their traditional passenger business has almost dried up (cites). Of course, there are implications in such actions that may further increase uncertainty. For example, UberEats has been in battle with food retailers in Australia over delivery fee structures but the company is reportedly not only digging its heels in but is seemingly reluctant to be more flexible in adjusting their fee structures in the current Covid-19 environment (Durkin, 2020). The core uncertainty here is whether this action is signaling power play for channel control or simply a business taking advantage of the uncertain environment by acting opportunistically. Going forward, we would need to look at how these businesses can better prepare themselves so that they can become not only more resilient to overcome the uncertainty imposed by unexpected events but also be more agile to cope with these challenges by being flexible and innovative.

## 2.4. Uncertainty management

Managing uncertainty involves strategies that help firms either *reduce* (risk management) or *cope* with (strategic management) uncertainty; reducing uncertainty is a natural motivator that guides firms' behavior, whereas coping with it allows firms to adapt their strategy to deal with the type of uncertainty faced by them (Sniazhko, 2019). Uncertainty reduction involves information gathering, proactive collaboration or cooperation, and networking; whereas, uncertainty coping consists of flexibility (diversification and operational adaptation), imitation (copy competitors and early movers), reactive collaboration and/or cooperation, control and avoidance (Simangunsong, Hendry, & Stevenson, 2012). For instance, many food retailers in the United Kingdom (Co-op, Waitrose, etc.) have been forced to reduce their offers on shelves and to focus on delivering the most essential products, to reduce the operational pressure and give more time to retailers' employees to prepare shelves, clean stores and respond to abnormal customer demand during the lockdown due to Covid-19. More employees were also deployed to increase cleaning across all operations. To reassure customers safety concerns, retailers have offered free hand washing to customers, implemented social distancing with limiting number of customers in outlets, and limiting contact at pay points with installing the protective screens across stores and increasing the card contactless limit to £45.

During times like these, reactive collaboration and/or cooperation (e.g., shifting the risk and uncertainty to the firms' partners) is the most common strategy used by firms to handle environmental or industry uncertainty. Firms may also try to avoid uncertainty when the level of

environmental and industry uncertainties is much greater than their worst expectations. Overall, managing uncertainty involves reducing the probability of undesirable outcomes and their impact on the businesses at various stages of the value chain (Figueira-de-Lemos & Hadjikhani, 2014). For instance, Aldens is family owned butcher SME, based in Oxford and established in 1783, supplies universities, restaurants, pubs, etc., and they faced an 85% reduction in orders overnight (Midcounties, 2020). Aldens partnered with regional Midcounties Co-op retailer to supply fresh meat and substitute those product lines that were in jeopardy because of increased consumer demand and disrupted supply chains. Similarly, many SMEs in fashion industry have started making face masks and lab coats, to meet the insatiable demand for these personal protective equipment (PPE). Similarly, many alcohol factories are now producing hand sanitisers, while a small firm (Isinova) was able create a system to use the Decathlon diving Mask as a pulmonary ventilator (Murdock, 2020).

In this context, it may also be useful to see the experience of Samsung, a South Korean giant in consumer electronics and home appliances, during the ongoing Covid-19 crisis. Being fully aware of the risks of single sourcing, Samsung has established a vast manufacturing network over the years with factories in Brazil, India, Indonesia, South Korea, and Vietnam, to fulfill its huge production demand and to reduce its dependence on China. Unsurprisingly, this has helped Samsung shift its production from one location to another during the ongoing Covid-19 crisis, thereby facing just a slow-down, and not a complete shutdown in production. Similarly, to compensate for the closure of retail stores, Samsung has leveraged its contracts with mobile phone retailers and Benow (a payment and EMI technology firm) to create an e-commerce platform so that its retail business can continue to sell and deliver the products to its customers (Mukherjee, 2020). Samsung has also launched additional services to maintain its customer relationships, such as “Free Repairs for the Frontline” program to offer free smartphone repair services to healthcare workers and special discounts for first responders and healthcare professionals (Mihai, 2020).

### 3. Conclusion and implications

Globalization has changed the world of business in the last few decades and despite so many natural (e.g., bushfires, droughts, earthquakes, floods, and hurricanes) and human (e.g., global financial crisis, pandemics such as SARS and Ebola, terrorism and wars) disasters during this time, we have managed to bounce back every time after a period of setback. In this context, Covid-19 is a unique case due to the speed with which it has spread all over the world and created a havoc in the global economy. From the evidence available so far, it seems that most countries have managed to take the right steps in restricting its further spread by restricting human movement, which in turn has had a debilitating impact on the economic activity. As many of these countries now move towards gradual easing of these restrictions, it would be interesting to see how quickly the businesses and economies bounce back (Business Standard, 2020). One of the challenges in this would be the ability of governments and private businesses to predict the risk associated with each stage of the reopening to manage the overall uncertainty associated with this process, in order to avoid a second wave of Covid-19 cases with similar or possibly even worse economic consequences.

The Covid-19 crisis also highlights the importance of other types of uncertainty that have hitherto been overlooked in international business research, such as social and informational uncertainty that will likely have inevitable economic repercussions. For example, the success of social distancing and other restrictions (which closed many businesses down) depends on the extent to which the society as a whole accepts and abides by these rules that challenge their normal way of living. This social uncertainty and public unrest from being lockdown for months could lead to a huge pent-up demand for products missed by them. This in turn may result in a ‘bull-whip’ effect, which could cripple

the global supply chains due to wide variations between the demand estimates and supply (Lee, Padmanabhan, & Whang, 1997).

Similarly, this crisis has shown the importance of informational uncertainty and the growing role and influence of direct communication and social media, with inconsistent news and communication from different sources causing confusion and panic. In this regard, UK retailers communicated directly to their customers, sending a personal letter explaining all measure they have taken (limiting product range and SKU, focusing on most essential products, additional safety measures in outlets, etc.) to face abnormal customer demand and disruption of international distribution channels. In this way, the retailers managed to reassure customers’ confidence in continuous supply of household goods and mass panic was avoided. This has major implications for media companies and regulators on how they can play a more constructive role in future, especially during global disasters like the ongoing Covid-19 crisis. Future research may learn from these experiences and try to provide more formal definitions of these new types of uncertainty (e.g., social and informational) and incorporate these within a more comprehensive conceptual framework of uncertainty in international business context.

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- Piyush Sharma (PhD)** is a Professor of Marketing at Curtin University, Australia. He serves as the Regional Editor (Asia) for Journal of Knowledge Management, Associate Editor (Marketing and International Business) for Journal of Business Research and Senior Editor (Marketing) for International Journal of Emerging Markets. He is also a member of the Editorial Review Boards of the Journal of the Academy of Marketing Science, Journal of International Business Studies, Journal of Service Research, European Journal of Marketing, and Journal of Service Theory and Practice, among others. His research appears in the Journal of International Business Studies, Journal of the Academy of Marketing Science, Journal of Service Research, International Journal of Research in Marketing, Journal of Business Research, Industrial Marketing Management, Psychology & Marketing, European Journal of Marketing, Journal of Service Management, Journal of Service Theory and Practice, Journal of Services Marketing, Journal of Marketing Management, Journal of Advertising, and Journal of Retailing and Consumer Services, among others.
- Tak Yan Leung (PhD)** is an Associate Professor of Accounting at the LSK School of Business & Administration, Open University of Hong Kong. Her research interests include corporate finance, corporate governance, and executive compensation. She has won a number of competitive research grants and published articles in a several top international journals, including Academy of Management Journal, Accounting and Finance, International Review of Economics and Finance, International Review of Accounting, Banking and Finance, Journal of Corporate Finance, British Journal of Management, Journal of Empirical Finance, International Business Review, among others. She serves as a member of the Editorial Review Board of the Journal of Business Research.
- Russel P.J. Kingshott (PhD)** is a Senior Lecturer of Marketing at Curtin University, Australia. His research on relationship marketing, business-to-business marketing, service employee wellness, psychological contracts, marketing strategy, and services marketing, appears in Industrial Marketing Management, Journal of Service Management, Journal of Service Theory and Practice, European Journal of Marketing, Asia Pacific Journal of Management, Journal of Marketing Management, and Journal of Services Marketing, among others. He serves on the Editorial Review Boards of the Journal of Business Research and Industrial Marketing Management.
- Nebojsa S. Davcik (PhD)** is an Associate Professor of Marketing at the EM Normandie Business School, Oxford, UK. His research covers brand and marketing management concepts, resource-based inquiry as well as quantitative methods. He has published his work in leading academic journals, such as the Journal of Business Research, European Journal of Marketing, Journal of Product and Brand Management, Asia Pacific Journal of Management, among others. He also serves as a member of the Editorial Review Boards of the Journal of Business Research and Journal of Product and Brand Management.
- Silvio Cardinali (PhD)** is an Associate Professor in Marketing and Sales Management at the Management Department of the “Giorgio Fuà” Faculty of Economics at the Politecnica delle Marche University. He has published 5 monographic work and more than 70 book chapters and articles in various international journals including Industrial Marketing Management, Journal of Business Research, Management Decision, Journal of Intellectual Capital, Management Research Review, Journal of Marketing Education, Italian Journal of Marketing, Italian Journal of Management. He is the creator and lead partner of European projects IN.KAM.S. and S.M.I.le, and he has also cooperated on other European projects, including BIG, DNDS and CEnTour.