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Author(s): Baber, William W.; Ojala, Arto

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Change of International Business Models during Covid-19

William W. Baber and Arto Ojala

Abstract

In this chapter, we discuss how Covid-19 impacts firms' business models in the international context and how firms should aim toward business models built on network trust, cost cutting, and automation to maximize resilience and provide better chances to survive these challenging times. We apply a business model framework that divides business models into five elements including Product/Service, Value Constellation, Finance Structure, Information Flow, and Decision Making Structure. We argue that some elements of a business model may have strong impact on how other elements change in international business models. Businesses may use these ideas to create or avoid changes to their business models.

Covid-19 and international business models

The tremendous impact the novel Corona Virus of 2019 (Covid-19) has had on the international business environment is incontrovertible. When writing this chapter, the nature of those impacts however has not yet become fully clear. Moreover, we cannot know whether the world will return to a pre-pandemic normal, or some different post-pandemic normal. Indeed, if there is no affordable effective and safe vaccine or cure available worldwide, we may live in a permanently pandemic world. Thus, the nature of international business and how it might change in the near future are unavoidably unclear. International business practitioners and academics must prepare for radical as well as subtle shifts in business models of large multinational firms, small technology companies, and governmental or non-profit organizations that will likely impact execution, profits, policy and more. Nonetheless, we can seek some informed estimates and insights about likely changes and provide some examples from firms who have taken actions to reduce the impact of pandemic to their international business operations.

The term business model refers to a narrative, often in graphic form, that explains and depicts how a business functions (Baden-Fuller & Morgan, 2010; Osterwalder et al., 2010; Wirtz, 2019). The depiction can refer to an industry, a single organization, or a business activity within the organization (Wirtz, 2019). Business models comprise several elements including products and services, value proposition, activities, structure of organization, value network, value delivery, costs-revenues, information, decision making and Decision Making Structure, environment, strategy, partner network, and so on (Al-Debei & Avison, 2010; Osterwalder et al., 2005; Teece, 2010; Timmers, 1998; Voelpel et al., 2004; Zott & Amit, 2010). In this paper, we apply five business model elements adapted from business model literature focusing on recent developments in the digitalized world (Baber et al., 2019a, 2019b, 2020; Ojala, 2016) to better understand business models in the current pandemic world. We also believe that these elements matter most to international businesses in the Covid-19 moment because their changes will impact each other (Kindström & Kowalkowski, 2014) and because change is inevitable. The elements are: 1) Product/Service, 2) Value Constellation, 3) Finance Structure, 4) Information Flow, and 5) Decision Making Structure.

Changes in business model elements

To survive through the hard times created by the Covid-19 pandemic, and in a new post-Covid-19 environment, firms need to look for innovative solutions and be ready to make radical changes to their business models. Transformations may occur in physical, digital, and cultural spaces. We hope our discussion will help firms survive change and help theoreticians to link interactions among business model elements. The following sections propose potential and emerging changes for each business model element and identify their impact on other elements.

Products/Services

The Product/Service element refers to an innovation that firms bring to markets and the related business logic (Baber et al., 2019a). Innovating new business models require entrepreneurial mindsets to find alternative ways of doing business, such as changing, expanding, or abandoning the original Product/Service offerings or entering new markets as Covid-19 destroys and creates international business opportunities. Because of Covid-19, firms may be under pressure to make changes to the Product/Service element of their business models, or even provide totally new types of Products/Services to the international markets.

There are numerous examples where the pandemic has forced changes in a firm's product/service element, such as distilleries making hand sanitizer or Mercedes F1 designing ventilators. As an example, Kyrö Distillery Company in Finland was expecting to lay off temporarily a significant number of their employees as the international demand for their alcohol drinks had decreased dramatically. This was due to the fact that restaurants and bars in several countries closed their doors because of Covid-19. At the same time, there was a lack of hand sanitizers in the market. At Kyrö, they invented a process to manufacture sanitizer using their existing equipment and, in that way, responded to the new demand in the market. By adding new a product portfolio to their offering, Kyrö was able to avoid lay off their employees and cover losses in the sales of alcohol products. Such quick reactions can benefit brand image as well as revenues as it has done in the Kyrö and Mercedes F1 cases. Some industries are expecting more conventional product shifts such as from fixed wing to rotary wing aircraft or different package sizes (Abboud, 2020). That is, if the easily transmitted virus persists, countless products and services might need to be altered, redesigned, abandoned, or replaced.

Changes in the Product/Service element may cause changes within other elements of the business model. For instance, Finance Structure may change as costs might increase and become a challenge because new or adjusted products could require significant investment. Changes within the Product/Service element might however be very difficult to implement, as they may require deep digital transformation, for example, regular manufacturing giving way to 3D printing or remote implementation through digital tools. Firms exporting physical products, may need to comply with new standards and regulations requiring certification of product and process regarding hygiene of materials, packaging, and workers. New compatibility issues in terms of matching regulatory and cultural expectations might become significant barriers to adoption of such products.

Value Constellation

The Value Constellation refers to the key actors, supply chains, and value exchange among partners, shareholders, customers, etc. within the ecosystem (Autio et al., 2017; Ojala, 2016; Normann & Ramirez, 1993). The impact of Covid-19 on Value Constellation depends, for example, on issues such as trust in the network, members of the network, and which activities are in-house versus offshore or outsourced. If a component provider or a partner providing critical services has

difficulties—slow delivery or work stoppages—because of the pandemic, it may have direct impact on a firm's ability to survive.

The Value Constellation creates the value proposition of a business model through interaction, bringing together strategic partners as well as major and minor suppliers. In the past decade or so, the emphasis has shifted from networks of tightly connected firms optimized for cost and speed efficiency in Just-in-Time relationships to broader but more robust and expensive networks (Christopher & Peck, 2004). These new networks will be more trusted after removal of partners that failed to maintain quality or reliability under the stress of the pandemic. An increase in trust has been previously connected to creation and intensification of sole supplier relationships (Chandra & Kumar, 2000). However the pressure to create parallel supply chains, which are less efficient than sole supplier relationships (Slack et al., 2013), increases in a world that is less driven by efficiency and more by resilience (Christopher & Peck, 2004). Networks may insist on trust in order to be activated, especially in urgent situations (Gelles, 2020). Need for resilience among members of the value Constellation is underlined by disasters such as the 2011 earthquake in Japan, the Covid-19 pandemic, and political reactions against globalization.

Nonetheless, international businesses may find it sensible to move from making and delivering goods to designing them and sending the order specifications to local makers. Apple's "Designed in California, Made in China...shipped everywhere" business model is copied by numerous international businesses exploiting offshore manufacturing. The model could, for example, transform to "Designed in home country, Made everywhere, ...shipped locally". In this model, the batch size is far smaller, delivered locally only, and the manufacturer depends on a suite of tools assembled by the distant parent firm rather than relying on giant factory sites in, for example, China. In the innovated business model, specifications, manufacturing processes, and orders would all move digitally. As the current Covid-19 pandemic has shown, if a firm is dependent on one manufacturer of spare parts and the manufacturer closes the factory because of Covid-19, there is very little to do more than wait until the factory restarts. The suggested model would save on shipping costs, but increase manufacturing costs while sharply decreasing political and disaster risk. Thus, much would depend on the technical competence of local partners (Zhu et al., 2006) and the ability of manufacturers to provide foolproof, turnkey manufacturing tool suites and systems.

Value Constellation in the international context during Covid-19 may become highly dependent on how much a firm can deliver its services over the Internet or robotically. Delivery of value can be physical, or virtual through the Internet. Converting from physical products to online products may not be possible for all classes of goods. Once production is local rather than distant, delivery can be done by trusted means within that country. Multinational corporations seeking to keep control over local delivery might develop robotic services from point of entry to destination. In order to demonstrate complete control over sanitation, they might consider also robotic delivery from factory door to point of embarkation. If regulatory agencies or customers demand, international businesses can gain or protect value by collecting video of the product as it moves through automated lines and packaging to show disinfection and other key activities. Thus, the confirmation of safety during delivery of value can become a value proposition that is created during production and shipping. Geely Auto Group, in China, already delivers the keys to new cars by robotic drones to ensure hygienic, no-touch handover. Similarly, the international hotel chain Motel One now identifies hygiene practices including certification by a respected institute. These challenges can be met by additional sensors, drones, and data capacity, especially as 5G and Internet of Things (IoT) applications mature.

Finance Structure

The third element, Financial Structure, referred to also as the revenue model (e.g. Ojala, 2016), includes the processes and actions through which a firm makes money in the market. These include

lending, subsidies, leasing, investments and so on. Changes in other business model elements may cause reconsideration and adjustment of the international Finance Structure. Examples might include a radical cut of costs around expatriate staffing and travel due to the pandemic which necessitate expensive third-party services such as auditing and certifying that are needed when trusted home country nationals become absent.

The standard model of buying supplies (cost), transforming them (cost), and selling them (cost) for money (revenue) will survive through the ages. However newer finance models such as leasing, servitization, subscription ownership, etc. may become more common in the Covid-19 and post-Covid-19 worlds. For example, if disaster risk is evaluated to have grown, shorter terms of ownership and lower immediate costs may give way to higher lifetime revenues per customer. Customers may pay more to allow themselves freedom to end payments; businesses may gain more total income but risk sudden drops in revenue as end users cancel in reaction to economic, political, natural, and other disasters. This part of business models may become more volatile and more dependent on borrowed capital at the start of projects. In the face of long and uncertain repayment cycles, finance partners may insist on local partners, causing change in the Value Constellation. Electronic payment already allows direct international transfer of payments and this is unlikely to change. This conventional approach however may be eclipsed by fintech upstarts such as Wirecard and Revolut or by tokenized payments because blockchain solutions allow payment as contract conditions are fulfilled. Crypto exchanges such as Gemini, Quoine, and others are well positioned to handle such work. In a post-Covid-19 world, the advantage of these payments is speed and disintermediation of clumsy international clearing systems allowing direct transactions with suppliers and even end users. Such digital and locally managed systems may also decrease the political risk of blocked profit repatriation. Tokenized payments could mean incidental changes to Information Flows, but adjustments to the element covering finance, cost, and revenue do not absolutely necessitate changes in other business model elements.

Information Flow

The fourth element, Information Flow, refers to the information exchange among the partners, customers, and other stakeholders within the business model (Timmers, 1998). This information is used to create value or to reassess the business model (Amit and Zott, 2001; Timmers, 1998). In the global pandemic, international Information Flow relies all the more on existing digital communications tools like Zoom, Teams, Skype, Slack, and other communication and collaboration systems. At the same time, certain types and sources of information might become unnecessary or unreliable, especially those relying on direct interaction through physical platforms such as trade shows, conferences, and co-located offices.

Much information, especially tacit knowledge (Polanyi, 1966), which is by nature intangible and non-digitized, moves person to person. The social distancing requirements of the Covid-19 pandemic have made such knowledge transfer and management much more difficult. If social distancing continues, changes to physical interaction will have to happen. One example would be the ubiquitous installation of high-resolution screens that allow individuals to hear and see the actions of co-workers, mentors, and teammates. These electronic windows that would approximate side-by-side work atmospheres. Not only would these allow teammates in the same building to safely work together transferring tacit knowledge, such screens would allow teammates in distant cities to remain in close touch registering body language, even facial expressions and instant reactions to the news and events. This would cause a shortening of the information pipeline in business models and thus accelerate information dissemination within an organization and its network.

Fewer expatriate workers may mean less information about foreign market opportunities and changes transferring from branches to international headquarters. Thus, international businesses may need to adjust the Value Constellation, spending more on consultants and verifiers to scan the horizon

and to confirm actualities on the ground. Increasing automation of data production and its management through IoT technologies means an opportunity for centralized analysis and understanding of trends. These functions are developing currently in international businesses. As costs decrease and ability increases, the analysis may decentralize from HQ into local markets. The pandemic is likely to accelerate implementation of IoT which, as skills and systems improve, will speed the dissemination of data and analyses through the network.

Decision Making Structure

Changes may also occur to the structure of Decision Making Structure including decision making in the business model. Currently, it is typical for decisions with local, not global, impact to be made locally. However, if trusted expatriate staff are removed due to health or political concerns, more decision making or authorizing of power may migrate from branches to headquarters offices. Governance networks with (high trust) and without (low trust) trusted expatriates are shown in Figures 1 and 2 respectively below.

In Figure 1, local and regional problems are resolved at the local and regional levels; the headquarters becomes involved only with regard to global problems. This process is comfortable to headquarters because trusted expatriates are collocated with teams outside of headquarters.

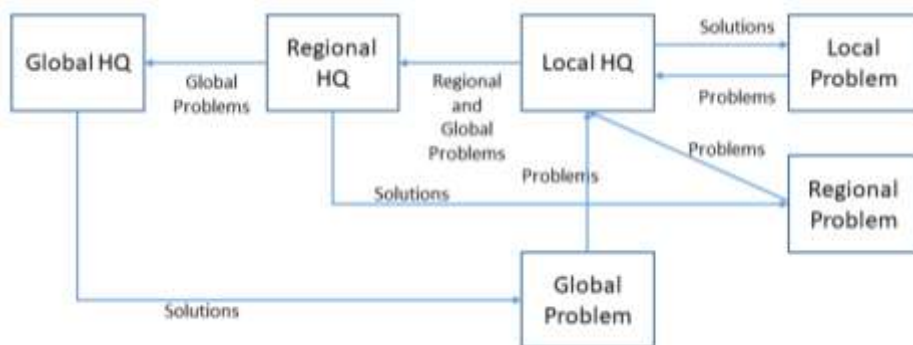


Figure 1. High trust due to collocation of Expatriates

In Figure 2, the headquarters has far fewer or no trusted staff in remote locations. The result is that fewer decisions are made in those locations and more decisions are made at the headquarters. Unless there are enriched information flows to the headquarters, the decisions are likely to be of lower quality than in the state described by Figure 1. Since the expatriates themselves are the source and filter of local insights and information, the system must replace the information flows or suffer with poor information. One solution for multinational firms is to pay new Value Constellation members, i.e. consultants, for local information. Another is to develop novel flows of information, perhaps through human capital or through digital sensors. Another is to place more trust in local staff.

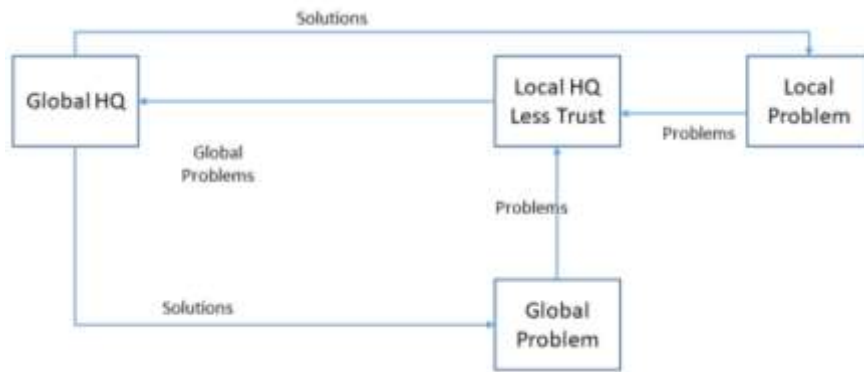


Figure 2. Low trust due to lack of Expatriates

Change centered on the Decision Making Structure element is likely to cause other elements to change. Partners in the Value Constellation may be added or removed as expatriates and decision making move away from local branches and new parties are hired to adjust, replace, and improve Information Flow. Finance Structure may adjust by becoming local, or becoming more centralized. The Product/Service element may change as decision making is abandoned at one level or another. While the Decision Making Structure has direct impact on at least three other elements, the other elements do not necessarily impact Decision Making Structure. Thus, business planners should consider altering the Decision Making Structure carefully, perhaps using it to cause change in other elements, or minimizing its change to avoid impact on other elements.

Conclusion

From the above discussion we can conclude that there are immanent radical changes to business models of international business. These changes may be challenging, but they are possible to manage. Many changes will be driven by new cost structures, adoption of technology by partners, or the claiming of advantages created. The business model elements will interact dynamically, for example a change in Decision Making Structure may save costs and at the same time allow more local decision making in finance. Changes in Decision Making Structure as a result of withdrawing expatriates and changing the Finance Structure will impact other business model elements. Changes following those changes may in turn cause or make possible additional adjustments to other elements of a business model. Dynamic cycles of adjustments to business model elements may mean that the process of change lasts longer than a single cycle of action and reaction. It is likely that changes will interact dynamically as adjustments in any one business model element cause change in others, and those changes cause new changes to the first element.

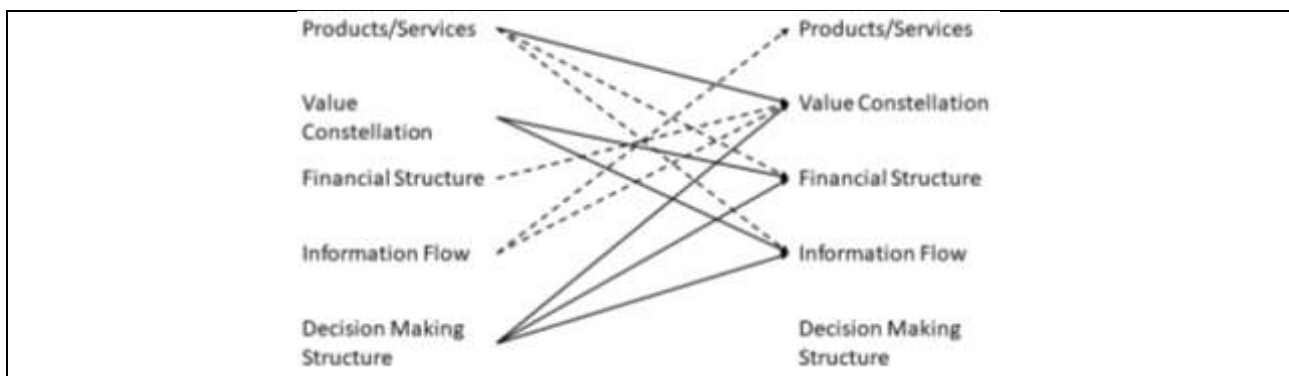


Figure 3. Likely impacts by Business Model elements on Business Model elements.

Figure 3 depicts the relative power of change that business model elements are likely to have on each other. While Product/Service element is inextricably linked to the Value Constellation, they are less closely linked to finances and information flows, though the latter would change if digital transformation was in play. Value Constellation changes would most likely impact Finance Structure and Information Flow as parties entered or exited the network. Nonetheless, impact on other elements is not strictly necessary. While other elements seem likely to change the Information Flow, changing the flow of information may not directly or immediately impact the other elements. In the end, it is place and process of making decisions that is likely to impact other elements.

Beyond considerations about business models, the nature of changes depends on the course of the pandemic. The longer the pandemic lasts and the poorer the medical solutions, the more radical the innovations will be. The root cause may be the Corona-19 virus, but the triggers will be regulation, demands of customers and suppliers, and risk management. These triggers of change will cause dynamic interactions and change among business elements.

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