

## The Impact of the Covid-19 Pandemic on Firms' Organizational Designs

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In this commentary I examine the potential impact of the Covid-19 pandemic on firms' organization designs and speculate on how the pandemic may influence organization design research. By organizational design, I mean an organization's optimal levels of differentiation and integration given relevant internal and external contingencies.<sup>[1]</sup> In this regard, a key distinction is between the short-run, that is, the situation in the aftermath of the decision by a large number of countries, international associations, and other agencies that the health crisis was a pandemic that required drastic measures (i.e., approximately mid-March 2020), and the long run in which the disease is better understood and handled (effectively, two to three years from now). The temporal frame is likely to crucially matter to the effect of the pandemic on firms' organization designs. The long run may mean everything from a complete reversal to the pre-pandemic situation to a more or less permanent situation of sporadic outbreaks and lock-downs that require more social distancing. Whichever scenario manifests will have important implications for organization design. However, even with a relatively quick reversal to pre-pandemic trading and interaction patterns, there are likely to be permanent traces left on organization design. For organization design scholars the pandemic presents not only a unique test-bed for examining existing principles of organizational design but might also stimulate new theory related to the temporal dimension of organization design and the influence of path-dependence. Thus, reflecting on the pandemic suggests that major external contingencies have different short-term as compared to long-term effects on organizational design, but also that major disturbances are likely to leave 'permanent' traces on

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the design of organizations – notions that seem absent from extant organization design research.

### **Short-Run Consequences of the Pandemic on Organization Designs**

The economic disruption induced by the Covid-19 was caused by governments reacting to the health threat by locking down parts of the economy, as well as by individuals reacting cautiously to the threat by, for example, cutting back on services from restaurants, bars, cinemas, and the like.

This had a number of immediate organizational design implications, caused by physical distance becoming an important contingency. First, much on-site work (particularly in the supporting ‘techno-structure’; Mintzberg, 1979) was transformed to work mediated by tools like Zoom and in general electronic platforms substituted for direct coordination under conditions of co-presence in the coordination of work efforts. Second, this seems to have been accompanied by a higher level of real delegation as companies were compelled to transfer decision competence to local managers (e.g., Carlsberg transferred more competence to country managers; see also Dill, 2020).

Economics-based organization design theory indicates that these changes are accompanied by changes in reward systems towards more performance-dependent salaries, more reliance on output rather than input measures of efforts, and a higher degree of formalization as organizations seek to maintain control under conditions of distance, virtual work and reduce the moral hazard problems from a higher level of informational asymmetry (see Jensen and Meckling, 1995). In fact, the latter challenges may lead firms to substitute independent contractors (e.g., freelancers) for employees. Alternatively, firms may invest more in building employee relations, possibly backed up by giving them more incentives in the form of ownership stakes in the enterprise. Clearly, the implications for rewards and ownership arrangements are different here, and which predictions are confirmed by the data remains to be seen.

### **Long-Run Consequences of the Pandemic on Organization Designs**

Concerning the longer-run consequences of the pandemic, one possibility is that the pandemic will turn out to have been just a temporary disturbance. Thus, the economy, including the organization of transactions across the economy (which of course would also include the world economy) will return to its pre-pandemic configuration, as supply chains are restored, international mobility patterns revert back, resources flow back into the experience economy, and so on. This could happen with the quick development of a successful vaccine, and/or the widespread use of effective testing and tracing routines. If on the other hand no vaccine is found and the virus doesn’t mutate towards less harmful variants, constant precautions in the form of continuing social distancing, reduced international labour mobility and business travel, and semi-closed borders will be permanent features of the business landscape. However, this will not be identical to the situation at the onset of the pandemic as innovations and changed work routines will emerge to compensate. For example, virtual meetings are likely to improve in quality.

However, even if the situation relatively quickly returns to ‘normal’, the pandemic is likely to leave a permanent mark on organization design. The reason is that major

disruptions imply major changes to the so-called 'economic fundamentals', namely technology, scarcities and preferences, which do not revert back to pre-disruption levels. For example, Watanabe (2016, p. 209) shows that 'technology improvements in the recovery were so rapid that, over the whole Great Depression period, technology growth was highest among pre-WWII decades'. It is also well known that major disturbances are associated with changes in preferences as these pertain to labour-leisure trade-offs and politics (Ohanian, 2010). It is likely, however, that the Covid-19 pandemic will imply the following permanent changes to firms' organizational designs under any scenario.

*Organizational differentiation and interdependencies.* The pandemic is likely to leave permanent traces on the organization of tasks in terms of specialization, bundling of tasks and sequencing of tasks. Organizational theory suggests that interdependencies may be thought of as pooled, sequential and reciprocal (Thompson, 1967). While this is often linked to the underlying technology, to some extent interdependencies are choice variables; for instance, some tasks that naturally involve reciprocal interdependencies can be made more sequential, given sufficient advance planning.

Moreover, firms can decide on the intensity with which they use certain technology-interdependence pairs. Because the pandemic makes reciprocal interdependencies more difficult to organize (as these often involve, direct and potentially lengthy face-to-face interaction), task interdependencies will tend to migrate more towards the pooled or sequential category, and firms will invest more in pre-planning task execution as there may be less scope for real time coordination. This will also tend to support modularization of tasks and task sequences so that highly interdependent tasks will tend to become more concentrated in technological and organizational modules (small rather than large work teams), which will necessitate a careful rethinking of the interfaces between work activities. The increased use of automation brought about by the pandemic may reinforce these tendencies (Lee, 2020).

Thus, research may address whether the Covid-19 has in fact resulted in more technological and organizational modularization, for example, using regression discontinuity designs. The problem with such research is that panel datasets with relevant organization design information are basically non-existing. However, it may be possible to exploit public register data (such as those in the Scandinavian countries) that have plant-level employee data. For instance, it may be that the pandemic has driven a trend toward more plants and towards plants with fewer employees.

Such changes may sacrifice some advantages stemming from specialization and the exploitation of complementarities. On the other hand, efficiencies may be realized as firms have to rely less on potentially wasteful face-to-face coordination and more on automation, pre-planning and the design of standard operating procedures (see Bartik et al., 2020, for survey data with a bearing on the efficiencies and inefficiencies of remote work).

*The organization of work.* The proportion between on-site and remote work will likely not bounce back to former proportions because of preference changes (many employees have discovered the possibility of remote work and have come to like it), technological change (tools that facilitates remote work will rapidly improve, including the use of hologram-

assisted communication and sophisticated means of monitoring employee productivity at a distance), and politics (remote work better supports a green transformation agenda). The increased use of remote work may imply a decreasing use of teamwork (which is easier to manage on-site), smaller teams (that are easier to coordinate remotely), and an increasing use of management by individual objectives and rewards.

*Organizational boundaries.* Many forces set in motion by the pandemic impact organizational boundaries by impacting labour transactions and transactions involving intermediate inputs and capital assets. On the one hand the use of remote work may decrease organizational loyalties and investments in firm-specific human capital and reduce the need for input monitoring. This will tend to increase the use of freelance, part-time work rather than permanent full employment, thereby shrinking firm boundaries. The increased use of automation – which many observers argue will be a permanent legacy of the pandemic – will reinforce this shrinkage. On the other hand, to the extent that the pandemic leads to a permanent decline in the extent of globalization that implies, for example, fewer suppliers, it may be a force pulling in the direction of more vertical integration, as international competition is less likely to alleviate the hold-up risks of locking in to one or a few suppliers.

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The Covid-19 pandemic will have many and complex consequences for organizational design, even with a relatively rapid return to pre-pandemic conditions. Overall, the pandemic is likely to lead to more remote work, more delegation, smaller teams, more delegation and more widespread use of workers who are more loosely connected to the organization. However, it is also likely to lead to more formalization, more planning, and a heavier use of individual-level rewards. Some of these changes are efficiency-enhancing while others are efficiency-reducing. Whether the net effect is positive or negative remains to be seen.

Many of these changes are well understood by organization design scholars. As such, the pandemic provides a test bed for examining established ideas in organization design theory. Of course, it potentially provides unique opportunities for identifying causal effects, as the pandemic hit industries, countries and regions differentially. But, the pandemic also provides opportunities for conceiving new ideas on organization design, particularly with respect to the temporal frames within which designs are conceived, implemented and changed. For example, little attention has been paid in organization design scholarship to path-dependence, but even with an otherwise complete reversal to pre-pandemic conditions, it is likely that the pandemic will have left permanent traces on firms' designs.

However, organization designs interact with other key aspects of firms, such as resource acquisition and development and strategy, and permanent changes in organization design are therefore likely to have similarly permanent ramifications throughout the organization. This suggests that the above distinctions between the short and long-term impact on organizations and the possibility of path-dependence effects go beyond organization design and include many other aspects of organizations, potentially opening up

an exciting new research agenda on the impact of major disturbances on organizations in terms of the temporal distribution of organizational consequences.

## NOTE

- [1] Organizational design includes firms' internal division of labour (in terms of divisionalization, departmentalization, job descriptions, etc.) and how they allocate task responsibility to external as opposed to internal parties, as well how they keep their internal and external division of labour together by means of the allocation of authority, rewards, planning, routines, and information flows, as well as formal and informal contracts as well as ownership positions.

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