

COVID-19: WHITE PAPER RATIONAL DECISIONS UNDER UNCERTAINTY – PRACTICAL ADVICE FOR EXECUTIVES AND MANAGERS

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EXECUTIVE SUMMARY

In the current uncertain business environment, you have to (re-)act and decide faster and more flexible than usual. To counter complexity and uncertainty, we recommend relying on simple decision rules that can provide satisfying accuracy levels, while reducing time and effort.

HOW DO CONSUMERS BEHAVE?

In light of the Covid-19 pandemic, contagion does not only refer to spread of infections, but has also an economic dimension, that is, emotional and social contagion among consumers and spread of market disturbances across firms, industries, and national economies. Consumers do not decide in a rational manner and are guided by herding behavior. Estimating future developments of demand for your products and services thus becomes highly difficult and complex.

Organizational learning through gaining insights and knowledge in the Covid-19 pandemic can help you to establish sustainably successful structures, processes, and resource reconfigurations.

HOW ARE ORGANIZATIONAL PROCESSES CHANGING?

Behavioral changes in the Covid-19 pandemic are not limited to consumers. Your company is affected by adverse developments that, in turn, impact your organizational processes. You replace established routines by proactive crisis management measures. Your decision making has to be fast and adaptive and is characterized by urgency, complexity, and high uncertainty. Your management faces tremendous internal and external pressures to change and adapt.

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Since organizational change is long-term and often causes opposition of employees who are scared and forced to abandon their routines, you are required to unite opposing interests.

In the following, we provide you with crisis-related decision-making processes and practical advice how to apply them.

HIGH UNCERTAINTY HAMPERS RATIONAL ORGANIZATIONAL DECISION MAKING

Business-to-consumers relations are substantially changing: significant increases in demand for certain products and services on the one hand – tremendous demand shortfalls across a multitude of products and services on the other hand. Consumer demand changes transfer to upstream activities of the value chain and thus impact business-to-business relationships. Instead of making rational and demand-oriented decisions, consumer behavior is often influenced by peers.

The long-term development of demand and sales depend on the duration of restrictions and exit scenarios. Besides, purchasing power, disposable incomes, and individual time preferences are decisive. We expect that catch-up effects of demand will differ: they are likely to occur for consumer goods, while non-utilized services cannot be compensated later and higher investment might be postponed, respectively.

Consequently, your decisions are subject to high uncertainty. In contrast to risk, you – as decision maker – do not know all possible options with their outcomes and probabilities. You might not be familiar with such extreme business environments and hence lack relevant information and knowledge. However, you have to make short-term and flexible decisions.

HOW CAN YOU STILL MAKE TARGETED AND FOCUSED DECISIONS?

SIMPLE DECISION RULES CAN BE AN APPROPRIATE DECISION-MAKING STRATEGY

Given the uncertainties and complexities illustrated above, simple decision rules can be a valid alternative to analytically complex and information-intensive decision making. Simple decision rules (i. e., heuristics) are strategies that ignore part of the information, with the goal of making decisions more quickly, accurately, and with less effort¹. They aim to reduce complexity and simplify decision contexts by relying on less information, in short: less can be more².

Currently, is it highly difficult for you to apply model- or simulation-based decision-making methods due to a vast amount of – unknown – factors. Thus, you should prefer sufficiently satisfying over optimal decisions.

CONSIDER CURRENT INSIGHTS FOR YOUR DECISION MAKING

You are actually well-equipped: existing organizational knowledge on the one hand and a certain familiarity with exceptional situations and fluctuations in demand on the other hand.

Your corresponding experiences can aid you to adapt your decision making to the current situation. To do so, do not only rely on your internal data and informational resources, but also on information provided by external sources including business partners, best cases, or scientific findings. In this context, big data are both valuable and challenging informational resources. Urgent needs for action possibly require an accuracy-effort trade-off, that is, you can decide based on – usually – unstructured mass data, but at the cost of more (processing/analytical) effort.

PROFIT FROM LEARNING EFFECTS DURING THE CRISIS

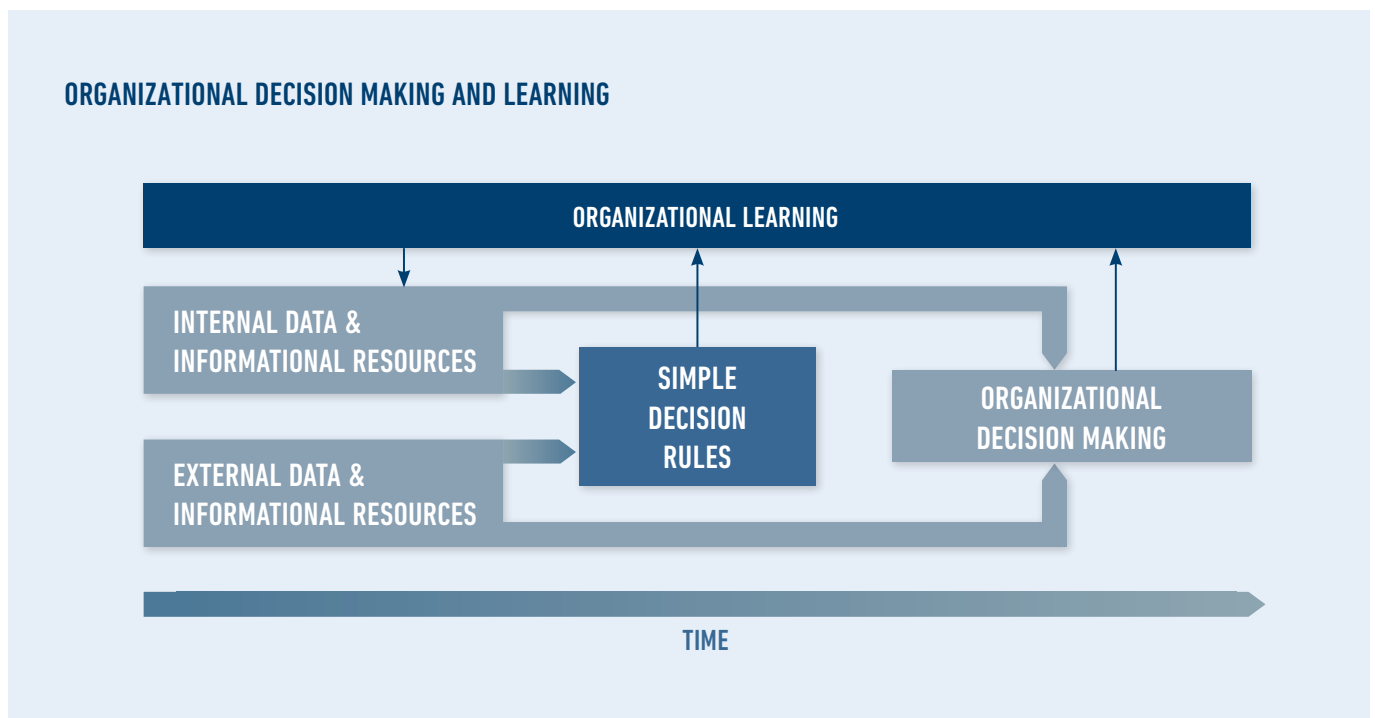
In spite of the severe consequences of the crisis for your company, you can now gain valuable insights and experience in respect to organizational processes and consumer behavior under uncertainty. Based on the knowledge currently acquired, you can build resilient and sustainably successful structures, processes, and resource configurations.

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THE FOLLOWING FIGURE ILLUSTRATES HOW CURRENT AND FUTURE ORGANIZATIONAL DECISION MAKING AND LEARNING OPERATE.



PRACTICAL RECOMMENDATIONS:

HOW SHOULD YOU – AS EXECUTIVES AND MANAGERS – ACT IN THE SHORT-TERM?

Uncertainty characterizes this crisis, and many questions lack answers. Your business environment is complex and subject to permanent and fast changes. Under such conditions, you should opt for flexible and pragmatic decision instead of optimal decisions. Therefore, you should proceed as follows:

1. At the first step, define which information and decision criteria are relevant for you
2. Less can be more: stop your information search when you identified (the) relevant information
3. Decide on the basis of the information you previously identified as being relevant and ignore other information

HOW CAN YOU APPLY THIS PROCEDURE FOR YOUR PRODUCTION CAPACITY PLANNING?

1. Search for unusual capacity and demand situations that resemble the current crisis (e.g., past demand shortfalls or seasonal fluctuations)
2. Stop your search when you have identified a sufficiently similar past situation
3. Adapt planning, sourcing, and other processes based on the past situation

You can possibly repeat this procedure to achieve improvement and a certain degree of optimization.

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Independent of the decision-making processes, we recommend gathering comprehensive data and information related to consumer and competitor behavior, internal organizational processes, and others during the crisis. If no structures and processes for the collection, storage, and usage of data exist, you should consider establishing them in the future. Data and information currently acquired constitute valuable assets for future adaptation and transformation processes.

WHAT SHOULD BE YOUR MEDIUM- AND LONG-TERM FOCUS?

The learning processes taking place in the crisis are crucial for your medium- and long-term success, as data-driven business models can significantly profit from the information currently gathered. The experiences and insights you gain now could be the foundation of data-analytical methods such as scenario-based sales and demand forecasts. Depending on your data-analytical capacities and capabilities, you can develop medium- and long-term scenarios. The following tripartite scenario model can serve as a starting point:

1. Basic scenario: gradual return to normalcy in terms of demand and sales potential
2. Best-case scenario: no sales restrictions and substantial catch-up effects of demand across all product categories and customer segments
3. Worst-case scenario: substantial sales restrictions, demand shortfall, and/or enduring supply chain interruptions

Even if such scenarios were not purely quantitative or included only qualitative insights, they could provide initial guidance for strategic planning. In times of extraordinary uncertainty that limits decision accuracy, guidance is a first step to learn to adapt and withstand.

References

¹ Gigerenzer, G. & Gaissmaier, W. (2011), Heuristic decision making, *Annual Review of Psychology*, 62, 451–482.

² Artinger, F., Petersen, M., Gigerenzer, G. & Weibler, J. (2015), Heuristics as adaptive decision strategies in management, *Journal of Organization Behavior*, 36, 33–52;

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