

# How to Better Anticipate Supply Chain Disruptions as Caused by the COVID-19 Pandemic, to Mitigate Negative Business Impact?

**Stefan Wesenauer**

Pegaso International, Malta  
wesenauer@quickline.ch

**Fabian Russ**

Pegaso International, Malta  
fa.russ.4.0@gmail.com

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## Abstract

*The globalization of supply chains made it more difficult to manage and control them as their complexity has significantly increased, and thus more and higher risks are now involved. The supply chain disruptions that the world is facing in the course of the pandemic crisis demonstrated this clearly by affecting almost all industries across the globe.*

*Supply chain risk management considering all kinds of crisis situations have been extensively researched in the literature. However, a crisis like the COVID-19 pandemic, which, for example, affects nearly all businesses in all countries, has not happened in recent years.*

*This study applies the existing supply chain risk management (SCRM) concepts and methods on the concrete example of the chip (semiconductor) crisis with its current supply shortage. By focusing on these electronic components, it investigates the decisive indicators with which the experienced supply chain disruptions could have been anticipated. The qualitative research method was used to collect specific data on the topic of semiconductors through an expert interview. In addition, the method of literature research was applied and data from the field on the subject of demand and price development, e.g., for certain raw materials, were used and evaluated.*

*Our findings suggest that specific early warning indicators will be a valuable input for the supply chain risk management processes, and consequently allow a faster response to uncertainties or crises. Moreover, our results may allow further investigation in other industries using other critical supply components.*

**Keywords:** supply chain risk management, supply chain disruptions, COVID-19 pandemic crisis, risk management factors, early warning indicators, proactive risk management, supply shortage, electronic component supply